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A revision of Palaearctic *Medon* IX. New species, new synonymies, a new combination, and additional records (Coleoptera: Staphylinidae: Paederinae)

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Abstract

Types and additional material of *Medon* Stephens, 1833 from the Palaearctic region are revised. Fourteen species are (re-)described and illustrated. Eight of these species, six of them micropterous, belong to the *M. apicalis* group: *M. excavatus* sp. n. (Greece: Pelopónnisos); *M. schawalleri* sp. n. (Nepal: Solukhumbu); *M. bifidus* sp. n. (Nepal: Manaslu); *M. biapicalis* sp. n. (Nepal: Manaslu); *M. dhaulagiricus* sp. n. (Nepal: Dhaulagiri); *M. annapurnae* sp. n. (Nepal: Annapurna); *M. inexcisus* sp. n. (Nepal: Annapurna); *M. corniger* sp. n. (India: West Bengal, Assam; China: Yunnan). Four species are assigned to the *M. ferrugineus* group: *Medon varamontis* sp. n. (Azores: São Miguel, the fourth anophthalmous species recorded from the Atlantic Islands); *M. niger* Cameron, 1924 (West Himalaya); *M. shaanxiensis* sp. n. (China: Shaanxi); *M. perforatus* sp. n. (China: Zhejiang). One species, *M. umbilicatus* Cameron, 1924 (Himalaya), belongs to the *M. fusculus* group and one is of uncertain affiliations: *M. flavomarginatus* sp. n. (Nepal: Manaslu). The following additional taxonomic acts are proposed: *Medon niger* Cameron, 1924 = *Hypomedon punctatus* Coiffait, 1975, syn. n., = *Medon raraensis* Coiffait, 1982, syn. n.; *Medon umbilicatus* Cameron, 1924 = *M. trapeziphallus* Coiffait, 1975, syn. n.; *Luzea rubecula* (Sharp, 1889), comb. n. (ex *Medon*) = *Luzea valida* Assing, 2011, syn. n. Lectotypes are designated for *Medon niger* Cameron, 1924, *M. umbilicatus* Cameron, 1924, and *M. rubeculus* Sharp, 1889. Additional records, among them several new country records and a first record from the West Palaearctic region, are reported for 29 previously described species. The distributions of 16 species are mapped. The genus is now represented in the Palaearctic region by 78 confirmed species, one of them with five subspecies. Four of these species and one subspecies are of doubtful identity. A checklist of the *Medon* species of the Palaearctic region is provided.

Zusammenfassung

Typen und weiteres Material der Gattung *Medon* Stephens, 1833 aus der Paläarktis werden revidiert. Vierzehn Arten werden beschrieben bzw. redeskribiert und abgebildet. Acht, davon sechs brachypter, gehören in die *M. apicalis*-Gruppe: *M. excavatus* sp. n. (Griechenland: Pelopónnisos); *M. schawalleri* sp. n. (Nepal: Solukhumbu); *M. bifidus* sp. n. (Nepal: Manaslu); *M. biapicalis* sp. n. (Nepal: Manaslu); *M. dhaulagiricus* sp. n. (Nepal: Dhaulagiri); *M. annapurnae* sp. n. (Nepal: Annapurna); *M. inexcisus* sp. n. (Nepal: Annapurna); *M. corniger* sp. n. (Indien: Westbengalen, Assam; China: Yunnan). Vier Arten werden in die *M. ferrugineus*-Gruppe gestellt: *Medon varamontis* sp. n. (Azoren: São Miguel, die vierte von den Atlantischen Inseln bekannte anophthalme Art); *Medon niger* Cameron, 1924 (West-Himalaya); *M. shaanxiensis* sp. n. (China: Shaanxi); *M. perforatus* sp. n. (China: Zhejiang). Eine Art gehört in die *M. fusculus*-Gruppe: *M. umbilicatus* Cameron, 1924 (West-Himalaya). Die Gruppenzugehörigkeit einer weiteren Art ist unsicher: *M. flavomarginatus* sp. n. (Nepal: Manaslu). Folgende taxonomische Änderungen werden vorgenommen: *Medon niger* Cameron, 1924 = *Hypomedon punctatus* Coiffait, 1975, syn. n., = *Medon raraensis* Coiffait, 1982, syn. n.; *Medon umbilicatus* Cameron, 1924 = *M. trapeziphallus* Coiffait, 1975, syn. n.; *Luzea rubecula* (Sharp, 1889), comb. n. (ex *Medon*) = *Luzea valida* Assing, 2011, syn. n. Für *Medon niger* Cameron, 1924, *M. umbilicatus* Cameron, 1924 und *M. rubeculus* Sharp, 1889 werden Lectotypen designiert. Weitere Nachweise von 29 beschriebenen Arten und Unterarten werden gemeldet, darunter mehrere Erstnachweise, davon einer für die Westpaläarktis. Die Verbreitung von 16 Arten wird anhand von Karten illustriert. *Medon* ist derzeit mit 78 überprüften Arten, eine davon mit fünf Unterarten, in der Paläarktis vertreten. Die Identität von vier dieser Arten sowie einer Unterart ist ungeklärt. Ein Katalog der *Medon*-Arten der Paläarktis wird erstellt.

Key words

Coleoptera, Staphylinidae, Paederinae, *Medon*, *Sunius*, *Luzea*, Palaearctic region, taxonomy, new species, new synonymies, new combination, new records, lectotype designations, distribution, checklist

Introduction

According to the latest contribution to the knowledge of *Medon* Stephens, 1833 in the Palaearctic region (Assing 2010), the genus was represented in the West Palaearctic by 58 species and subspecies, plus five nomina dubia. A catalogue was provided by Assing (2005a). In the East Palaearctic region, the genus was represented by 36 species, 26 of which have been recorded from the Himalaya and adjacent regions (Assing 2010; Smetana 2004). However, most of these species had not been revised and, in view of the unclarified phylogenetic and systematic affiliations within Medonina, it seemed likely that many of them referred to other medonine genera.

In the meantime, some recently revised species have been moved from *Medon* to the genus *Sunius* STEPHENS, 1829 or from *Sunius* to *Medon* (ASSING 2011a). Also, in the course of a revision of the Himalayan representatives of the genus *Lathrobium* GRAVENHORST, 1802 of the subtribe Lathrobiina (ASSING 2012), it was discovered that one species, *L. jaljalense* COIFFAIT, 1984, in fact belonged to *Medon*.

The present paper deals with some previously unrevised species of *Medon* from the East Palaearctic. Moreover, material from various sources examined since the latest contribution (ASSING 2010) yielded as many as twelve undescribed specied from Nepal (eight species), China (two species), the Azores (one species), and Greece (one species), four new synonymies, a new combination, and numerous additional records of previously described species.

Material and methods

The material treated in this study is deposited in the following public institutions and private collections:

BMNH	The Natural History Museum, London (R. G. Booth)
HNHM	Hungarian Natural History Museum (Gy. Makranczy)
MCSNV	Museo Civico di Storia Naturale, Verona (L. Latella; vial A. Zanetti)
MNHUB	Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch)
NHMB	Naturhistorisches Museum Basel (M. Geiser, I. Zürcher)
NHMW	Naturhistorisches Museum Wien (H. Schillhammer)
NME	Naturkundemuseum Erfurt (M. Hartmann)
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg (L. Behne)
SMNS	Staatliches Museum für Naturkunde, Stuttgart (W. Schawaller, K. Wolf-Schwenninger)
SNSD	Senckenberg Naturhistorische Sammlungen Dresden (O. Jäger)
TLMFI	Tiroler Landesmuseum Ferdinandeum, Innsbruck (M. Kahlen)
cAnl	private collection Sinan Anlaş, Turgutlu
cAss	author´s private collection
cPüt	private collection Andreas Pütz, Eisenhüttenstadt
cSch	private collection Michael Schülke, Berlin
cScm	private collection Ludger Schmidt, Neustadt a. Rbg.
cSha	private collection Alexey Shavrin, Daugavpils

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs. The maps were created using MapCreator 2.0 (primap) software.

Total length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra (at the sutural angle), and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The parameral side of the aedeagus (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Part of the material collected by Volker Brachat, Heinrich Meybohm, and the author and listed as "cAss" is deposited in MNHUB.

The Palaearctic *Medon* fauna

Medon is currently represented in the Palaearctic region by 78 confirmed species, one of them including five subspecies. Four of these species and one subspecies are of doubtful identity because their type material is unavailable, because they are represented by females only, and/or because the type locality is uncertain. The latter is the case with *M. molestus*, which is therefore neglected in the figures on zoogeography and species diversity. One name is probably synonymous.

The vast majority of the species and subspecies (60 species and four subspecies) is known from the West Palaearctic region (including Middle Asia); 16 species are distributed in the East Palaearctic region, with *M. gratus* ranging from Afghanistan to North India and *M. umbilicatus* ranging from North Pakistan to Nepal. Except for three species (two of them of doubtful identity) of uncertain intrageneric affiliations, the species are attributed to four species groups (see ASSING 2006). The *M. apicalis* group includes 30 species, 18 of them West Palaearctic and 12 East Palaearctic. Based on the absence of combs of palisade setae at the posterior margin of the male sternite VII, *M. indigena* and *M. feloi*, previously attributed to a separate group (Assing 2006), are tentatively assigned to the *M. apicalis* group. The *M. ferrugineus* group is represented in the West Palaearctic by 13 species (two of them doubtful), one of them with five subspecies (one doubtful), and in the East Palaearctic by three species. The *M. brunneus* group comprises six species, all of them distributed in the West Palaearctic region. The *M. fusculus* group includes 23 species (one of them probably synonymous), only one of which (*M. umbilicatus*) has been recorded from the East Palaearctic region. Thirty-one species from the East Palaearctic and Oriental regions are of uncertain generic affiliations within the Medonina. Based on an examination of the type material of some species and on the details indicated in the original descriptions of the remainder, they do not seem to be closely allied to the species here attributed to *Medon*. For a detailed checklist see the end of the paper.

Species descriptions and additional records

The *Medon apicalis* group

Medon apicalis (Kraatz, 1857)

Material examined

Spain: 1 ex., Canary Islands, La Palma La Galga, path to Cubo de la Galga, laurel forest litter, 17.XI.2008, leg. Schülke (cSch).

Comment

For a map illustrating the expansive Atlanto-Mediterranean distribution of *M. apicalis* see Assing (2006).

Medon maronitus (Saulcy, 1864)

Material examined

Turkey: 1 ex., Bursa, Karaorman, 39°54'N, 28°28'E, 550 m, 15.IV.2010, leg. Brachat & Meybohm (cAss); 2 exs., Isparta, 12 km N Sütçüler, 37°36'N, 30°59'E, 1100 m, oak forest, litter and grass, mostly between stones, sifted, 26.IV.2011, leg. Assing (cAss); 1 ex., Adana, Belemedik, 37°20'N, 34°55', 690 m, 16.IV.2011, leg. Brachat & Meybohm (cAss).

Comment

This species is widespread from the East Mediterranean to Middle Asia; for a map illustrating its distribution see Assing (2004a).

Medon bucharicus (Bernhauer, 1902)

Material examined

Tajikistan: 1 ex., Pendzhakent region, Khaurdak env., 2000 m, 8.V.1999, leg. Putchkov (cSch).

Comment

Medon bucharicus is distributed in Middle Asia (Tajikistan, Kyrgyzstan, Usbekistan) (Assing 2006).

Medon impar Assing, 2004

(Fig. 1)

Material examined

Greece: Rhódos: 2 exs., Agios Nikolaos, Fountoukli, 36°16'N, 28°00'E, 320 m, 3.IV.2012, leg. Meybohm (cAss); 1 ex., Epta Piges, 36°15'N, 28°07'E, 70 m, 6.IV.2012, leg. Meybohm (cAss); 1 ex., 2 km W Apollona, 36°15'N, 27°57'E, 320 m, 5.IV.2012, leg. Meybohm (cAss); 1 ex., WSW Embonas, 36°15'N, 27°55'E, 340 m, moist and deep stream valley with *Acer* and other deciduous trees and bushes, moist leaf litter sifted, 17.III.2013, leg. Assing (cAss).

Comment

The known distribution of *M. impar* is confined to Rhodes (Fig. 1).

Medon guignoti Coiffait, 1987
(Fig. 1)

Material examined

Greece: 1♂ [teneral], Evritania, Agrinio–Karpenissi, 38°55'N, 21°36'E, 500 m, subterranean pitfall trap, 10.VI.2010–30.V.2011, leg. Giachino & Vailati (cAss).

Comment

Medon guignoti is known only from few localities in mainland Greece, one in Macedonia, and the type locality in Bulgaria (Fig. 1). The above teneral male was collected with a subterranean pitfall trap.

Medon excavatus sp. n.
(Figs 1–5)

Type material

Holotype ♂: "GR. Ahaïa, Aroania, Ag. Varvara, 1085 m, N37°52'46", E22°00'29", 3.VI.2010–21V.2011, Giachino & Vailati leg. / Holotypus ♂ *Medon excavatus* sp. n. det. V. Assing 2013" (cAss). Paratypes: 3♂♂, 2♀♀ [partly teneral]: same data as holotype (cAss).

Etymology

The specific epithet is the past participle of the Latin verb excavare and alludes to the distinctly excavate posterior margin of the male sternite VII.

Description

Body length 4.1–4.8 mm; length of forebody 2.3–2.6 mm. Coloration: head blackish-brown; pronotum dark-brown, with the anterior angles slightly and diffusely paler; elytra dark-reddish; abdomen dark-brown, with the apex (segments VIII–X and posterior portion of segment VII) reddish; legs pale-reddish; antennae reddish.

Head approximately as wide as long; punctation coarse, very dense, areolate, and partly confluent; interstices reduced to very narrow ridges; dorsal surface matt. Eyes weakly convex, approximately half as long as postocular region in dorsal view.

Pronotum approximately as long as wide and approximately 0.95 times as broad as head, distinctly tapering posteriad; posterior angles very obtuse, but noticeable; punctation coarse, largely confluent, and distinctly coriaceous.

Elytra nearly 1.1 times as long as pronotum; punctation moderately fine and dense, interstices without microsculpture, narrower than diameter of punctures. Hind wings present. Protarsi without sexual dimorphism. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen approximately as wide as elytra; punctation dense and fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 2) posteriorly with broad and distinct excavation, lateral margins of this excavation each with a comb of 6–8 palisade setae, middle of excavation with 6 rather long black setae; sternite VIII (Fig. 3) transverse, posterior excision nearly U-shaped; aedeagus (Figs 4–5) approximately 0.55 mm long; ventral process relatively broad and apically rounded in ventral view.

Comparative notes

Based on external (punctation of head; coriaceous punctation of the pronotum), as well as on the male sexual characters (chaeotaxy of sternite VII and shape of the aedeagus), *M. excavatus* is closely related to *M. petrochilosi* Coiffait, 1970 and allied species. It differs from all of them by the posteriorly distinctly excavate male sternite VII, from the geographically close *M. petrochilosi* (Greece, Croatia) and *M. guignoti* (Bulgaria, Greece, Macedonia) also by the broad and apically more broadly rounded ventral process of the aedeagus in ventral view, and by the differently shaped apical internal structures of the aedeagus (lateral view). For illustrations of *M. petrochilosi*, *M. guignoti*, and other close relatives see Assing (2004a).

Distribution and natural history

The type locality is situated in Aroania in the northern Pelopónnisos, Greece (Fig.1 1). The specimens were collected with subterranean pitfall traps, suggesting that the species has a hypogean habitat.

Medon deharvengi Coiffait, 1982

Material examined

Nepal: 4 exs., southeastern Annapurna, Telbrung Danda, near Gangpokhara, 2700 m, 12.–13.VI.1997, leg. Jäger (SNSD, cAss).

Comment

This species is probably endemic to the Annapurna range. For additional records and illustrations of external and sexual characters see Assing (2010).

Medon manasluensis Assing 2010

(Figs 6–10)

Material examined

Nepal: 5 exs., Manaslu, Dudh Pokhari Lekh, below Helam Pokhari, 22.IV.2003, 2000 m, leg. J. Schmidt (cRou, cAss).

Comment

The above specimens are distinguished from the type material by the apically less concave ventral process of the aedeagus (ventral view) and by the somewhat narrower and deeper median incision of the posterior margin of the male sternite VII (Figs 6–10), but in the absence of additional evidence, these differences are interpreted as intra- rather than interspecific variation. The above locality is in the same mountain range as the type locality and only some 25 km away. For illustrations of the external and male sexual characters of the type material see Assing (2010).

Medon schawalleri sp. n.

(Figs 11–18)

Type material

Holotype ♂ [two legs and left antenna missing]: "532 Nepal: Solukhumbu Distr., Sanam, 2700–2800 m, 22.–23.V.1997, leg. W. Schawaller / Holotypus ♂ *Medon schawalleri* sp. n. det. V. Assing 2010" (SMNS). Paratype ♀ [both antennae missing]: same data as holotype (cAss).

Etymology

The species is dedicated to Wolfgang Schawaller (SMNS), specialist of Tenebrionidae, who collected the type specimens.

Description

Body length 4.0–4.3 mm. Coloration: head and pronotum brown to dark-brown; elytra reddish-brown to brown; abdomen dark-brown with reddish apex; legs yellowish-brown; antennae pale-reddish.

Head (Fig. 11) approximately as wide as long; punctation moderately coarse, defined, and moderately dense, in median dorsal portion sparse (Fig. 16); interstices without microsculpture. Eyes weakly convex, approximately half as long as postocular region in dorsal view.

Pronotum (Figs 11, 17) approximately as long as wide and slightly wider than head, with or without weakly defined impunctate midline; posterior angles evenly rounded; punctation moderately dense, similar to that of head.

Elytra (Figs 11, 18) short, approximately 0.6 times as long, and approximately as wide as pronotum, posteriorly dilated; humeral angles almost obsolete; punctation rather dense, fine, and shallow, less defined than that of head and pronotum; interstices without distinct microsculpture. Hind wings completely reduced. Protarsi without sexual dimorphism. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen approximately 1.1 times as wide as elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of sternite VII in the middle with small excision, on either side of this excision produced and with longer dark setae (Fig. 12); sternite VIII (Fig. 13) approximately as long as broad, posterior excision of semi-circular shape, its depth approximately 1/6 the length of sternite; aedeagus (Figs 14–15) distinctly bilobed apically.

Comparative notes

Based on the shape of the aedeagus (apically bilobed and hooked), as well as on the shape and chaetotaxy of the male sternite VII, *M. schawalleri* undoubtedly belongs to the *M. apicalis* group. It is readily distinguished from other geographically close representatives of this group (*M. gratus*, *M. manasluensis*, *M. deharvengi*) by the distinctly shorter elytra, the shape and chaetotaxy of the male sternite VII, and by the shape of the aedeagus, from *M. gratus* additionally by the different coloration and the absence of a palisade fringe at the posterior margin of the abdominal tergite VII, and from *M. deharvengi* also by the paler coloration, the much smaller and less convex eyes, the much less dense and less defined punctation of the head and pronotum, and by the absence of a sexual dimorphism of the protarsi. For illustrations of the male sexual characters of *M. deharvengi* see COIFFAIT (1982) and ASSING (2010).

Distribution and natural history

The type locality is situated near Sanam (27°26'N, 86°55'E) in Solukhumbu district, northeastern Nepal, at an altitude of 2700–2800 m. The reduced wings suggest that the species has a restricted distribution.

Medon bifidus sp. n.

(Figs 19–24)

Type material

Holotype ♂: "Nepal Manaslu Mts., 28°22'N 84°29'E, E slope of Ngali Khola Vall., 2000–2300 m, leg. Schmidt 15.V.2005 / Holotypus ♂ *Medon bifidus* sp. n. det. V. Assing 2012" (NME). Paratypes: 2♂♂, 2 sex?: same data as holotype (NME, cAss).

Etymology

The specific epithet (Latin, adjective) refers to the apically distinctly bifid ventral process of the aedeagus.

Description

Body length 4.0–4.5 mm; length of forebody 2.2–2.4 mm. Habitus as in Fig. 19. Coloration: forebody dark-brown to blackish-brown; abdomen blackish-brown to blackish; legs brown; antennae reddish.
External morphology as in *M. manasluensis* and *M. deharvengi*, distinguished only by the male sexual characters:
♂: sternites VII and VIII as in Figs 20–22; aedeagus as in Figs 23–24, ventral process distinctly bifid apically in ventral view.

Comparative notes

Based on the shape of the aedeagus (apically distinctly bifid), as well as on the shape and chaetotaxy of the aedeagus, *M. bifidus* is probably most closely related to the similar *M. deharvengi* from the Annapurna range. It is distinguished from this species by the subapically less constricted aedeagus (ventral view), as well as by the shallow median excision and the slightly different chaetotaxy of the posterior median process of the male sternite VII. The new species is readily separated from *M. manasluensis*, another endemic of the Manaslu range and representative of the same species group, by the apically distinctly bifid aedeagus and by the shape and chaetotaxy of the male sternite VII. For illustrations of external and the male sexual characters of *M. deharvengi* and *M. manasluensis* see ASSING (2010) and Figs 6–10.

Distribution and natural history

The type locality is situated in the Manaslu range in central Nepal. The adaptive reductions of eye size, the elytra and the hind wings, and of the palisade fringe at the posterior margin of tergite VII suggest that *M. bifidus* is endemic to this mountain range. The specimens were collected at an altitude of 2000–2300 m, together with *Medon niger*.

Medon biapicalis sp. n.

(Figs 25–31)

Type material

Holotype ♂: "Nepal, Manaslu Mts., Dudh Pokhari Lekh, upper Phulinagiri Madi, 19.–21.IV.2003, 2500 m NN, leg. J. Schmidt / Holotypus ♂ *Medon biapicalis* sp. n. det. V. Assing 2013" (NME). Paratypes: 5♂♂, 12♀♀: same data as holotype (NME, cAss); 1♀: "Nepal, Manaslu Mts., Dudh Pokhari Lekh, below Helam Pokhari, 22.IV.2003, 2000 m NN, leg. J. Schmidt" (NME).

Etymology

The specific epithet (Latin, adjective: with two apices) refers to the shape of the ventral process of the aedeagus.

Description

Body length 3.5–5.0 mm; length of forebody 2.1–2.3 mm. Habitus as in Fig. 25. Coloration: forebody dark-brown to blackish-brown; abdomen blackish-brown to blackish; legs and antennae yellowish-brown to brown.

External morphology (Figs 25–26) as in *M. manasluensis* and *M. deharvengi*, distinguished only by the male sexual characters:

♂: sternites VII and VIII as in Figs 27–29; aedeagus as in Figs 30–31, ventral process distinctly bifid apically in ventral view, the two apices broadly separated.

Comparative notes

As can be inferred from the highly similar external and particularly from the similarly derived male sexual characters (shape and chaetotaxy of the male sternite VII; apically distinctly bifid ventral process of the aedeagus), *M. biapicalis* belongs to the group of species allied to *M. deharvengi* and *M. manasluensis*. Among the species of this group, the male sexual characters are most similar to those of the geographically close *M. bifidus*, from which *M. biapicalis* is reliably distinguished only by the different shape of the aedeagus, particularly the more widely separated apices of the ventral process in ventral view.

Distribution and natural history

The type material was collected in two localities in the Dudh Pokhari Lekh in the Manaslu range, central Nepal, where *M. biapicalis* is most likely endemic. The specimens were collected at altitudes of 2000 and 2500 m.

Medon annapurnae sp. n.

(Figs 32–38)

Type material

Holotype ♂: "Nepal Annapurna, Sikles range, 1996 lg. Schmidt / Nyauli Kharka S Sikles 2400 m, 21.–24.4.1996 / DEI Ankauf J. Schmidt 1999 / Holotypus ♂ *Medon annapurnae* sp. n. det. V. Assing 2010" (SDEI).

Etymology

The specific epithet is the genitive of the name of the mountain range where this species was discovered.

Description

Body length 4.0 mm. Habitus as in Fig 32. Coloration: head and pronotum blackish-brown to blackish; legs brown with dark-brown femora; antennae dark-reddish.

Head (Fig. 33) approximately as wide as long; punctation coarse, defined, and dense; interstices distinctly narrower than diameter of punctures, without microsculpture. Eyes large and distinctly convex, approximately as long as, or even longer than postocular region in dorsal view.

Pronotum (Fig. 33) approximately as long as wide and 0.95 times as wide as head, posterior half of midline with narrow impunctate band of reduced length; punctation as dense as that of head, but slightly less coarse.

Elytra (Fig. 33) short, approximately 0.8 times as long, and slightly wider than pronotum, posteriorly weakly dilated; humeral angles weakly marked; punctation rather dense, fine, and shallow, less defined than that of head and pronotum; interstices without microsculpture. Hind wings completely reduced. Protarsi without sexual dimorphism, moderately dilated. Metatarsomere I longer than II, almost as long as the combined length of II and III.

Abdomen slightly wider than elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of sternite VII produced in the middle, median process apically truncate and with approximately 10 dark marginal setae (Figs 34–35); posterior margin of sternite VIII broadly and moderately deeply excised in the middle (Fig. 36); aedeagus (Figs 37–38) 0.55 mm long, stout, and with apically almost truncate ventral process in ventral view.

Comparative notes

Based on the similarly derived shape and chaetotaxy of the male sternite VII, the general morphology of the aedeagus, as well as similar external characters such as the dense and coarse punctation of the forebody and the large eyes, *M. annapurnae* is closely related to *M. deharvengi* and *M. manasluensis*. From both species, *M. annapurnae* is reliably distinguished only by the much stouter shape of the aedeagus (particularly of the ventral process), the different shape of the median posterior process of the male sternite VII, as well as by the slightly longer elytra.

Distribution and natural history

The species was found in two localities in the Annapurna range at altitudes of 2400–2500 m. The reduced wings suggest that it has a restricted distribution.

Medon dhaulagiricus sp. n.

(Figs 39–45)

Type material

Holotype ♂: "Nepal Dhaulagiri Mts., upp. Marang Khola Vail. [sic], 28°29'50"N, 83°27'37"E, 2500–2700 m, 16.V.2009, leg. J. Schmidt / Holotypus ♂ *Medon dhaulagiricus* sp. n. det. V. Assing 2012" (NME). Paratypes: 2♀♀: same data as holotype (NME, cAss).

Etymology

The specific epithet (adjective) is derived from the name of the mountain range where the species is probably endemic.

Description

Body length 4.0–4.5 mm; length of forebody 2.0–2.1 mm. Coloration: body blackish-brown to blackish; legs brown with paler tarsi; antennae reddish.

External morphology (Figs 39–40) as in *M. manasluensis* and *M. deharvengi*, distinguished only by the male sexual characters:

♂: posterior margin of sternite VII not produced in the middle, with a transverse row of approximately 20 long black setae (Figs 41–42); sternite VIII with relatively large and deep posterior excision (Fig. 43); aedeagus (Figs 44–45) with the apex of the ventral process deeply bifid.

Comparative notes

Based on the male sexual characters, *M. dhaulagiricus* is closely related to *M. deharvengi* and allied species. It is readily distinguished from all of them by the completely different shape and chaetotaxy of the male sternite VII and by the conspicuous morphology of the aedeagus.

Distribution and natural history

The species is probably endemic to the Dhaulagiri range in central Nepal, as can be inferred from the adaptive reductions of eye size, the elytra, the hind wings, and the palisade fringe at the posterior margin of tergite VII. The specimens were collected at an altitude of 2500–2700 m.

Medon inexcisus sp. n.

(Figs 46–50)

Type material

Holotype ♂: "Nepal-Himalaya, SE Annapurna mts., Krapa Danda s-slope / 2500 m, 30.V.1997, leg. O. Jäger, SMT Dresden / Holotypus ♂ *Medon inexcisus* sp. n. det. V. Assing 2012" (SNSD). Paratypes: 2♂♂: same data as holotype (SNSD, cAss); 1♀: "Nepal: Annapurna: Krapa Danda, 2500 m, 30.V.1997, leg. J. Schmidt" (SNSD).

Etymology

The specific epithet (Latin, adjective) alludes to the non-bifid ventral process of the aedeagus.

Description

Body length 4.0–4.3 mm; length of forebody 2.2–2.3 mm. Coloration: head, pronotum, and abdomen blackish; elytra dark-brown, lateral margins extensively paler. Externally highly similar to *M. deharvengi* and *M. manasluensis*, reliably distinguished only by the male sexual characters.

♂: posterior margin of sternite VII produced in the middle, the median process apically concave and with 6 dark and stout marginal setae (Figs 46–47); posterior margin of sternite VIII broadly and moderately deeply excised (Fig. 48); aedeagus (Figs 49–50) approximately 0.55 mm long, ventral process slender, not bifid in ventral view.

Comparative notes

Based on the similarly derived shape and chaetotaxy of the male sternite VII, the general morphology of the aedeagus, as well as similar external characters such as the dense and coarse punctation of the forebody and the large eyes, *M. inexcisus* is closely allied to *M. deharvengi*, *M. manasluensis*, and *M. annapurnae*. From these species, *M. inexcisus* is distinguished by the shape and chaetotaxy of the male sternite VII, as well as by the slender, apically not bifid ventral process of the aedeagus.

Distribution and natural history

The type locality, the Krapa Danda, is situated in the southeastern Annapurna range, central Nepal. The specimens were collected at an altitude of 2500 m. The reduced wings suggest that *M. inexcisus* has a restricted distribution.

Medon corniger sp. n.

(Figs 51–60, 62)

Type material

Holotype ♂: "Kosi Khola, 9.XI.1980 / Darjeeling Distr, India Bhakta B. / Holotypus ♂ *Medon corniger* sp. n. det. V. Assing 2013" (NHMB). Paratypes: 2♂♂, 3♀♀: same data as holotype (NHMB, cAss); 1♂, 1♀: "India: Assam, #8a, North Cachar Hills dist., Mt Borail, Borail Peak, 1700 m, 19.X.2005, 25°06'43"N, 93°03'11"E / sifting bamboo leaf litter in mountain rain forest, Cuccodoro & Marletta" (MHNG, cAss); 1♀: "India: Assam, #9c, North Cachar Hills dist., Mt Borail, Borail Peak–Notun Leikul, 1650 m, 20.X.2005, 25°06'47"N, 93°03'05"E / sifting moist leaf litter in forest with Fagaceae, leg. G. Cuccodoro & A. Marletta" (MHNG); 1♂: "China: Yunnan, Baoshan Pref., Gaoligong Shan, W Pass 35 km SE Tengchong, 2100 m, 24°50'18"N, 98°45'43"E, devast. prim. dec. forest, litter, wood, mushrooms sifted, 28.VIII.2009, leg. M. Schülke" (cAss); 3♂♂, 5♀♀: "Nepal, Manaslu Mts., S of Bara Pokhari, 08.IV.2003, 2300 m NN, leg. J. Schmidt" (NME, cAss, cSch).

Etymology

The specific epithet (Latin, adjective: with antlers or horns) alludes to the conspicuous shape of the apex of the ventral process of the aedeagus.

Description

Body length 4.2–5.1 mm; length of forebody 2.2–2.7 mm. Habitus as in Fig. 51. Coloration: head and pronotum blackish; elytra dark-brown to blackish; abdomen blackish-brown to blackish, with slightly paler apex; legs brown to dark-brown with yellowish to yellowish-brown tarsi; antennae dark-yellowish to reddish, often with infuscate antennomere I.

Head (Figs 52–53) approximately as long as broad or weakly oblong, widest across eyes; punctation coarse and rather dense, somewhat variable; interstices without microsculpture and glossy. Eyes large, as long as postocular region in dorsal view, or nearly so.

Pronotum (Figs 52–53) approximately as broad as long and as broad as head; punctation slightly less coarse than that of head; interstices without microsculpture; impunctate midline moderately broad.

Elytra (Figs 52–53) 1.0–1.1 times as long as pronotum; punctation dense, rather fine, and more or less defined; microsculpture absent. Hind wings fully developed.

Abdomen narrower than elytra; punctation fine and dense; interstices with shallow microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Figs 54–55) weakly transverse, posteriorly with transverse row of long black submarginal setae in characteristic arrangement, posterior margin slightly concavely produced in the middle; sternite VIII (Fig. 56) weakly transverse, posterior excision rather large and deep; aedeagus (Figs 57–60) 0.48–0.60 mm long; ventral process of highly distinctive shape, quadrifid apically.

Intraspecific variation

The shape of the apex of the ventral process of the aedeagus is subject to some variation, even in males from the same locality. The male from Yunnan is somewhat larger, has a more densely and coarsely punctate forebody (Fig. 45), and a somewhat larger aedeagus (Figs 51–52) with a slightly differently shape apex than the material seen from other regions. The male secondary sexual characters, however, are practically identical. The species is macropterous, suggesting that it is widespread. Therefore, since no convincing additional distinguishing characters were found, it is hypothesized to be conspecific with the holotype.

Comparative notes

Medon corniger belongs to the *M. apicalis* group, too, as is suggested by the modifications of the male sternite VII and by the morphology of the aedeagus. It is distinguished from other species of this group particular by the distinctive shape of the ventral process of the aedeagus, as well as by the shape and chaetotaxy of the male sternite VII. It additionally differs from most of the Himalayan representatives by the longer elytra. Females of *M. corniger* are distinguished from those of the externally highly similar and partly sympatric *M. niger* of the *M. ferrugineus* group only by the more slender protarsomere IV (transverse in *M. niger*).

Distribution and natural history

The species was recorded in one locality in West Bengal, two localities in Assam, North India, one in the Manaslu range in central Nepal, and one in Yunnan, China (Fig. 62). The specimens from Assam were sifted from bamboo and moist leaf litter in forests at altitudes of 1650 and 1700 m and those from Nepal were found at an altitude of 2300 m. The male from China was sifted from leaf litter in a degraded primary deciduous forest at an altitude of 2100 m.

The *Medon ferrugineus* group

Medon ferrugineus (ERICHSON, 1837)

Material examined

Turkey: Sakarya: 1 ex., Geyve–Taraklı, 40°26'N, 30°26'E, 710 m, 26.IV.2012, leg. Brachat & Meybohm (cAss); 1 ex., Geyve–Taraklı, 40°27'N, 30°28'E, 775 m, 26.IV.2012, leg. Brachat & Meybohm (cAss). Bolu: 4 exs., 26 km S Bolu, N Seben, 40°29'N, 31°36'E, 1410 m, grassy slope with scattered pine trees, grass, moss, and shrub litter sifted, 27.III.2010, leg. Assing (cAss). Kastamonu: 3 exs., 40 km NW Kastamonu, NE Azdavay, W Yeşilpınar, 41°42'N, 33°28'E, 1090 m, flooded field, under stones, 22.III.2010, leg. Assing (cAss); 1 ex., ca. 50 km W Kastamonu, road Daday–Eflani, 41°27'N, 33°20'E, 1000 m, stream valley, litter under shrubs sifted, 25.III.2010, leg. Assing (cAss). Isparta: 2 exs., Sultan Dağları, 15 km SSW Akşehir, Cankurtaran, 38°15'N, 31°24'E, 1860 m, under stones, 17.IV.2011, leg. Assing (cAss).

Comment

This Ponto-Mediterranean element is distributed from eastern Turkey to the southeast of Central Europe; for a distribution map see ASSING (2009).

Medon subcoriaceus (WOLLASTON, 1864)

Material examined

Canary Islands: 3 exs., La Palma, 1.8 km SSW Franceses, 28°49'N, 17°52'W, 800 m, laurel forest litter, 23.XI.2008, leg. Schülke (cSch).

Comment

Medon subcoriaceus is endemic to the Canary Islands, where it is rather common in all the larger islands except Lanzarote (ASSING 2006).

Medon dilutus dilutus (ERICHSON, 1839)

Material examined

Germany: 1♀, Niedersachsen, ca. 10 km N Wolfsburg, Barwedel, mixed forest, window trap, 28.V.–27.VI.2010, leg. Schmidt (cScm).

Comment

There are only very few recent records of this Adriato-Mediterranean subspecies from Germany (ASSING 2006). The above specimen was collected on the wing.

Medon dilutus cephalus KOCH, 1938

Material examined

Spain: 1 ex., Murcia, Mazarrón, El Algarrobo, 460 m, flight intercept trap, VII.2009, leg. Gallego (cAss). Italy: 1♀, Sardinia, Nuoro, Foresta di Montes, 40°10'N, 9°21'E, 970 m, 6.IV.2013, leg. Meybohm (cAss).

Comment

Flight records of this Atlanto-Mediterranean subspecies were previously known from May and August/September (ASSING 2010).

Medon dilutus pythonissa (Saulcy, 1865)

Material examined

Greece: mainland: 1 ex., Attika, Spétsai, 1.–10.VIII.1094, leg. Hammond (BMNH). Crete: 1 ex., coast near Rethimno, Petres estuary, 14.V.2001, leg. Apfel (NME); 1 ex., Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1120 m, grassy N-slope with oak, grass and oak litter sifted, 25.III.2012, leg. Assing (cAss); 3 exs., Lasithi Plateau, S Mesa Lasithi, 35°11'N, 25°31'E, 840 m, oak forest, sifted, 28.III.2012, leg. Assing (cAss); 3 exs., W Agios Nikolaos, Kroustas, 35°09'N, 25°39'E, 430 m, oak forest, moss, grass, and litter sifted, 29.III.2012, leg. Assing (cAss); 1 ex., S Anogia, Psiloritis, 35°15'N, 24°53''E, 1180 m, NE-slope with scattered oak, leaf litter and grass near snow sifted, 3.IV.2012, leg. Assing (cAss); 1 ex., ca. 7 km NW Anogia, 35°19'N, 24°49'E, 440 m, stream valley, with mixed Mediterranean vegetation, litter sifted, 4.IV.2012, leg. Assing (cAss); 2 exs., S Anogia, Psiloritis, 35°15'N, 24°52'E 1180 m, rocky N-slope with oak, litter and grass near snow sifted, 4.IV.2012, leg. Assing (cAss); 2 exs., Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1300 m, litter and grass sifted, 6.IV.2012, leg. Assing (cAss). Rhódos: 5 exs., Laerma, 36°09'N, 27°57'E, 260 m, beneath *Mastix*, 7.IV.2012, leg. Meybohm (cAss); 1 ex., Salakos spring, 36°17'N, 27°57'E, 100 m, 8.IV.2012, leg. Meybohm (cAss). Kos: 1 ex., 2 km S Kephalos, 36°44'N, 26°57'E, 150 m, 11.IV.2012, leg. Meybohm (cAss); 3 exs., Palio Pili env., 36°51'N, 27°11'E, 190 m, 13.IV.2012, leg. Meybohm (cAss).

Turkey: Manisa: 2 exs., Spil National Park, 38°33'N, 27°23'E, 1200 m, 27.IX.2008 (cAnl). Izmir: 1 ex., Orhanlı vill., 38°12'N, 26°58'E, 270 m, 10.IX.2009, leg. Yağmur (cAnl). Muğla: 1 ex., Bodrum, Aspat, Akvarlar, 18.IX.2009, leg. Yağmur (cAnl). Tekirdağ: 1 ex., Isiklar Dağı, 40°51'N, 27°26'E, 140 m, 9.IV.2010, leg. Brachat & Meybohm (cAss). Sakarya: 1 ex., Geyve–Taraklı, 40°26'N, 30°24'E, 700 m, 26.IV.2012, leg. Brachat & Meybohm (cAss); 2 exs., Geyve–Taraklı, 40°26'N, 30°26'E, 710 m, 26.IV.2012, leg. Brachat & Meybohm (cAss); 5 exs., Geyve–Taraklı, 40°27'N, 30°28'E, 775 m, 26.IV.2012, leg. Brachat & Meybohm (cAss). Balıkesir: 1 ex., Kurucam Tepe, 39°42'N, 27°09'E, 710 m, 13.IV.2010, leg. Brachat & Meybohm (cAss). Bursa: 2 exs., Samanlı Dağları, 40°28'N, 29°49'E, 780 m, 19.IV.2010, leg. Brachat & Meybohm (cAss). Konya: 1 ex., Sultan Dağları, NW Dereçine, 38°29'N, 31°15'E, 1320 m, oak forest, litter sifted, 21.IV.2011, leg. Assing (cAss). Antalya: 2 exs., 32 km NW Alanya, 36°46'N, 31°46'E, 400 m, oak litter, 18.II.2011, leg. Schülke (cSch, cAss). Niğde: 2 exs., E Madenköy, 37°27'N, 34°39'E, 1615–1870 m, 17.IV.2011, leg. Brachat & Meybohm (cAss). Adana: 1 ex., Kamışlı, 37°35'N, 34°53'E, 1350 m, 18.IV.2011, leg. Brachat & Meybohm (cAss); 1 ex., 7 km E Kamışlı, 37°32'N, 35°00'E, 1330 m, 26.IV.2011, leg. Brachat & Meybohm (cAss).

Cyprus: 1 ex., Troodos, Pano Platres env., 21.IV.2010, leg. Hlaváč (cAss).

Jordan: 9 exs., NW Ajlun, 32°20'N, 35°43'E, 850 m, 20.V.2007, leg. Kejval (NHMW, cAss).

Comment

Medon dilutus pythonissa is widespread and common in the Eastern Mediterranean region. For a map illustrating its Ponto-Mediterranean distribution see Assing (2006).

Medon robustior Roubal, 1920, originally described as a subspecies of *M. brunneus* Erichson, 1839, was synonymized with *M. pythonissa* by Assing (2004b), but subsequently listed as a junior synonym of *M. brunneus* (Assing 2006). The latter paper was submitted prior to the former, but was published with a delay of more than two years. *Medon robustior* is a junior synonym of *M. pythonissa.*

Medon africanus (Fauvel, 1872)

Material examined

Tunisia: 4 exs., Aïn Draham, 9.VI.1984, leg. Schillhammer (NHMW, cAss).

Comment

Medon africanus, the sister species of *M. rufiventris*, has been recorded only from Algeria and Tunisia (Assing 2006).

Medon pocofer (Peyron, 1858)

(Fig. 61)

Material examined

Russia: 1♂, Krasnodarskiy Kray, Centralniy district, mouth of Psakhe river near sea, 18.–19.IX.2008, leg. Enustshenko (cAss).

Comment

This rare littoral species was previously known only from the coasts of the Atlantic Ocean northwards to southern England and of the Mediterranean Sea (Assing 2006). The above specimen represents the first record from the Black Sea coast and from Russia. The distribution is illustrated in Fig. 61.

Medon varamontis sp. n.
(Figs 63–72)

Type material

Holotype ♂: "AZORES - São Miguel [17], Pico da Vara, 37°48'43"N, 25°12'38", 1050 m, boggy slope, 22.VII.2013, V. Assing / Holotypus ♂ *Medon varamontis* sp. n. det. V. Assing 2013" (cAss). Paratypes: 1♂, 2♀♀: same data as holotype (cAss); 1♂: same data, but "[20] ... 24.VII.2013" (cAss).

Etymology

The specific epithet is a noun (genitive) composed of the name of the mountain where the species was discovered and the genitive of the Latin noun mons (mountain).

Description

Body length 4.5–4.8 mm; length of forebody 2.0–2.2 mm. Habitus as in Fig. 64. Coloration: body blackish, with the pronotum and the head occasionally indistinctly paler; legs dark-brown, with the tibiae sometimes partly paler and the tarsi dark-yellowish; antennae reddish, with antennomeres I and sometimes II–III partly slightly infuscate. Whole body conspicuously matt.

Head (Fig. 65) rather large in relation to body, 1.02–1.10 times as broad as long; punctation shallow and moderately dense; interstices approximately as broad as diameter of punctures and with pronounced microreticulation (Fig. 66). Eyes reduced to minute rudiments of approximately the size of a macropuncture, without ommatidia and pigmentation. Antenna approximately 1.2 mm long; antennomeres IV approximately 1.5 times as long as broad and VII–X transverse.

Pronotum (Fig. 65) approximately as broad as long and 0.91–0.97 times as broad as head; punctation slightly less coarse than that of head; interstices with pronounced microreticulation (Fig. 67); impunctate midline moderately broad.

Elytra (Fig. 65) short, 0.65–0.70 times as long as pronotum; humeral angles nearly obsolete; dorsal surface somewhat flattened; punctation rather dense and shallow; microsculpture absent. Hind wings completely reduced. Protarsi with sexual dimorphism.

Abdomen broader than elytra; punctation rather fine and dense; interstices with pronounced microreticulation (Fig. 68); posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I–IV moderately dilated; sternite VII (Fig. 69) transverse, posteriorly with pronounced concavity, this concavity with a comb of 5–6 palisade setae on either side; sternite VIII (Fig. 70) with pronouned posterior excision; aedeagus (Figs 71–72) approximately 0.55 mm long; ventral process bifid apically in ventral view.

♀: protatsomeres I–IV not dilated.

Comparative notes

Based on the male sexual characters, *M. varamontis* undoubtedly belongs to the *M. ferrugineus* group. Three anophthalmous *Medon* species were previously known from the Atlantic Islands, all of them recorded from caves: *M. vicentensis* SERRANO, 1993 (Madeira), *M. feloi* ASSING, 1998 (Canary Islands: La Palma), and *M. antricola* ASSING, 2006 (Canary Islands: El Hierro). *Medon varamontis* is distinguished from all of them by the distinctly darker coloration, the more pronounced microsculpture, the more distinct punctation of the whole body, the shape of the aedeagus, and additionally as follows:

from *M. vicentensis* (*M. ferrugineus* group) by the more slender body, much shorter and less slender antennae (*M. vicentensis*: antennomeres III–IX distinctly oblong; antennomere IV more than twice as long as broad), less slender maxillary palpi, shorter elytra, and the different shape and chaetotaxy of the male sternite VII (posteriorly more strongly concave and with combs composed of less numerous palisade setae);

from *M. antricola* (*M. ferrugineus* group) by distinctly smaller body size, the transverse head (*M. antricola*: head distinctly oblong), the much sparser punctation of the head, the much smaller eye rudiments, the much shorter and less slender antennae (*M. antricola*: antennomeres IV–X oblong, IV approximately three times as long as broad), the less slender and posteriorly more strongly narrowed pronotum, the shorter elytra, and the shape and chaetotaxy of the male sternite VII (*M. antricola*: posterior margin broadly concave, in the middle with two tufts of long thin setae, and laterally with combs composed of 8–9 palisade setae);

from *M. feloi* (*M. apicalis* group) by the at least weakly transverse head (*M. feloi*: head weakly oblong), the more distinct punctation of the whole body, a less slender pronotum, shorter elytra, and the presence of combs of palisade setae at the posterior margin of the male sternite VII (absent in *M. feloi*).

Distribution and natural history

The type locality is situated in the Pico da Vara, the highest mountain of São Miguel (Azores: eastern group) in the east of the island. The reduced eyes and wings of *M. varamontis* suggest that this species is most likely a local endemic. Unlike other anophthalmous *Medon* species recorded from the Atlantic Islands, the specimens of *M. varamontis* were found neither in a cave nor in the MSS layer, but sifted from grass roots and litter in a mountain bog with dominant *Sphagnum* sp. and additionally with *Juniperus brevifolia*, *Calluna vulgaris*, grasses, and scattered *Rhododendron indicum* at an altitude of 1050 m (Fig. 63).

Medon exquisitus Kirshenblat, 1951

Medon exquisitus Kirshenblat, 1951: 541.

Comment

The original description is based on a single male from Nalband in Armenia (Kirshenblat 1951). It was subsequently reported based on a male from a cave near Tripoli in Lebanon by Coiffait (1969), who figured the male sternite VII and the aedeagus. According to Horn et al. (1990), the Kirshenblat collection is deposited in the Zoological Museum in St. Petersburg. On the occasion of a visit to this museum in 2011, the holotype was looked for, but not found. Based on the highly similar morphology of the aedeagus, *M. exquisitus* is a close relative of *M. castaneus* (Gravenhorst, 1802), if Coiffait´s interpretation is correct.

Medon niger Cameron, 1924

(Figs 62, 73–78)

Medon niger Cameron, 1924: 185.
Hypomedon punctatus Coiffait, 1975: 178 f., **syn. n.**
Medon raraensis Coiffait, 1982: 92 f., **syn. n.**

Type material examined

M. niger: Lectotype ♂, present designation: "Kotgarh 7000′, Simla Hills. Dr. Cameron. 17–IX.1921. / Débris / Medon not in genre [?] / Medon niger Cam. / Type H.T. / Syntype / M. Cameron Bequest. B.M. 1955-147 / Lectotypus ♂ *Medon niger* Cameron, desig. V. Assing 2011" (BMNH). Paralectotype ♂: "Chakrata Dist. Chulli Khud 6500′ / Dr. Cameron. 20.V.22. / Medon niger / Syntype / M. Cameron Bequest. B.M. 1955-147" (BMNH).

Comment

The original description is based on an unspecified number of syntypes from "Mussorie, Chakrata and Simla Districts" (Cameron 1924). Two males were located in the Cameron collection at the BMNH. The male in better condition is designated as the lectotype.

Hypomedon punctatus was described from a single female from "Kali-Gandaki-Tal entre Ghasa et Lete, Népal central" (Coiffait 1975). The holotype was examined earlier by Assing (2011a), who moved the species from *Sunius* to *Medon*. It is conspecific with the lectotype of *M. niger*.

An examination of the type material of *Medon niger* and *Hypomedon punctatus*, as well as of additional material from several localities in Nepal and India revealed that the species is somewhat variable in external characters such as punctation, size, and elytral length, and that the holotype of *H. punctatus* is within the range of intraspecific variation of *M. niger*. No differences in the male sexual characters were found. Hence the synonymy proposed above.

The original description of *Medon raraensis* is based on two males and two females from "Népal, Umg. Pina, région de Rara-See" (Coiffait 1982). As can be inferred from the details indicated in the description and particularly from the illustrations of the male primary and secondary sexual characters, the type material of *M. raraensis* is undoubtedly conspecific with the lectotype of *M. niger*.

Additional material examined

Nepal: 2♀♀, Annapurna, Mt. Panchhase, W Pokhara, 2000–2300 m, 18.V.1997, leg. Schmidt (SDEI, cAss); 4 exs., Manaslu, E-slope of Ngali Khola valley, 28°22'N, 84°29'E, 2000–2300 m, 15.V.2005, leg. Schmidt (NME, cAss); 6 exs., Manaslu, S Bara Pokhari, 28°15'N, 84°25'E, 2100 m, 29.IV.2005, leg. Schmidt (NME, cAss); 28 exs., Manaslu, S Bara Pokhari, 2300 m, 8.IV.2003, leg. Schmidt (NME, cAss); 1 ex., Manaslu, Dudh Pokhari Lekh, upper Phulinagiri Madi, 2500 m, 19.–21.IV.2003, leg. Schmidt (NME); 1 ex., Manaslu, Dudh Pokhari Lekh, helow Helam Pokhari, 2000 m, 22.IV.2003, leg. Schmidt (NME); 1 ex., 4 exs., S-slope of Dhaulagiri Himal, N Banduk village, 28°28'N, 83°35'E, 1900–2300 m, 6.V.2009, leg. Schmidt (NME, cAss); 1 ex., Karnali province, Humla district, 18 km NW Simikot, Chumsa Khola, 30°02'N, 81°39'E, 2900–3000 m, river valley, 21.VI.2001, leg. Hartmann (NME); 1 ex., Karnali province, Garjyakot, 2600 m, 22.V.1995, leg. Weipert (cAss); 1 ex., Karnali province, Jumla district, 2 km W Gothichaur, 2700 m, 20.V.1995, leg. Weigel (cAss).

India: 1♂, Uttaranchal, Nainital Division, Kumaon, 17.IX., leg. Champion (cAss); 10 exs., Uttarakhand, 5 km NE Govind Ghar, road to Ghangaria, 9.–10.VI.2011, leg. Shavrin (cSha, cAss); 1♀, Himachal Pradesh, Manali, 2000–2300 m, 14.V.1977, leg. Wittmer & Brancucci (NHMB).

Redescription

Body length 4.0–4.8 mm. Habitus as in Fig. 73. Coloration: body blackish; legs, except for the somewhat darker femora, and antennae reddish. (Note that the older material, including the types, is of somewhat paler coloration.)

Head (Fig. 74) usually approximately 1.05 times as wide as long; posterior angles marked; lateral margins subparallel in dorsal view; punctation coarse, defined, and dense, somewhat sparser in median dorsal portion; interstices shiny and without distinct microsculpture, in lateral, anterior, and posterior portion of dorsal surface narrower than diameter of punctures. Eyes large and moderately convex, approximately as long as postocular region in dorsal view.

Pronotum (Fig. 74) approximately 1.05 times as wide as long and as wide as head; midline impunctate at least in posterior half; punctation similar to, or slightly less coarse than that of head; interstices without microsculpture.

Elytra (Fig. 74) 1.02–1.10 times as long as pronotum; punctation dense and much finer than that of head and pronotum. Hind wings fully developed. Protarsi with distinct sexual dimorphism, more strongly dilated in males than in females.

Abdomen approximately as wide as elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of sternite VII broadly concave, with comb of usually seven palisade setae on either side (Figs 75); sternite VIII (Fig. 76) with rather deep posterior incision, near the margins of this incision with a few long black setae; aedeagus (Figs 77–78) 0.60–0.65 mm long, apex of ventral process weakly concave in ventral view.

Intraspecific variation

Medon niger is rather variable in size, head shape, punctation of the forebody, and elytral length.

Comparative notes

Based on the shape of the aedeagus (apically incised), as well as on the shape and chaetotaxy of the male sternite VII, *M. niger* undoubtedly belongs to the *M. ferrugineus* group. At present it is the sole representative of this group in the Himalaya. However, distinguishing females of *M. niger* from those of the highly similar and partly sympatric *M. corniger* is difficult. The only appreciable difference found is the shape of the protarsomere IV, which is distinctly transverse in *M. niger* and approximately as long as broad in *M. corniger*. Males are readily distinguished from those of *M. corniger* by the much more dilated protarsomeres I–IV, the completely different shape and chaetotaxy of the male sternite VII, and by the different morphology of the aedeagus.

Distribution and natural history

The species is distributed in the western Himalaya eastwards to the Manaslu range in central Nepal, where the distribution borders on that of the similar *M. corniger* (Fig. 62). The examined material was collected at altitudes between approximately 1900 and 3000 m in April, May, June, and September.

Medon perforatus sp. n.

(Figs 62, 79–83)

Type material

Holotype ♂: "China: Zhejiang [CH07-36], West Tianmu Shan N.R., way to peak of immortals, 30°20'34"N, 119°25'51"E, 1100–1200 m, primary mixed forest, litter, moss, sifted, 15.VI.2007, leg. A. Pütz / Holotypus ♂ *Medon perforatus* sp. n. det. V. Assing 2011" (cAss).

Etymology

The specific epithet (Latin, adjective: pierced) alludes to the circular hole formed by the apical lobes of the ventral process of the aedeagus.

Description

Body length 4.2 mm. Habitus as in Fig. 79. Coloration: head blackish; pronotum, elytra, and abdomen blackish-brown; legs dark-reddish, with the femora slightly darker; antennae reddish, with the basal half of antennomere I infuscate.

Head (Fig. 80) weakly transverse, 1.05 times as wide as long; punctation rather coarse and very dense, in posterior median portion of dorsal surface with small area with sparser punctation; interstices with shallow microsculpture, in most of dorsal surface much narrower than diameter of punctures. Eyes large and distinctly projecting from lateral contours of head, slightly longer than postocular region in dorsal view.

Pronotum (Fig. 80) weakly transverse, approximately 1.05 times as wide as long and approximately as wide as head; punctation dense, slightly less coarse than that of head; midline impunctate.

Elytra (Fig. 80) long, approximately 1.1 times as long, and distinctly broader than pronotum; humeral angles marked; punctation dense and rather fine; interstices without distinct microsculpture. Hind wings apparently fully developed. Metatarsomere I longer than II, but distinctly shorter than the combined length of II and III.

Abdomen slightly narrower than elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of sternite VII concave in the middle, on either side with comb of 6–7 palisade setae (Fig. 81); sternite VIII (Fig. 82) with rather broad and deep, U-shaped posterior excision; aedeagus (Fig. 83) 0.57 mm long; apex of ventral process bilobed, both apical processes overlapping apically, together forming a circle, and leaving a circular space in the middle.

Comparative notes

Based on the shape and chaetotaxy of the male sternite VII, as well as on the apically bilobed aedeagus, *M. perforatus* belongs to the *M. ferrugineus* group. It is reliably distinguished from other dark-coloured macropterous representatives of this group only by the male primary and secondary sexual characters.

Distribution and natural history

The type locality is situated in Zhejiang province, western China (Fig. 62). The holotype was sifted from litter and moss in a mixed forest at an altitude of 1100–1200 m.

Medon shaanxiensis sp. n.

(Figs 62, 84–88)

Type material

Holotype ♂: "China: Shaanxi, Qin Ling Shan, 110.06 E, 34.27 N, Hua Shan Mt. N Valley, 1200–1400 m, 118 km E Xian, sifted, 18./20.08.1995, leg. M. Schülke / Holotypus ♂ *Medon shaanxiensis* sp. n. det. V. Assing 2011" (cAss).

Etymology

The specific epithet (adjective) is derived from the name of the province where the type locality is situated.

Description

Body length 5.0 mm. Habitus as in Fig. 84. Coloration: head blackish-brown; pronotum, elytra, and abdomen dark-brown; legs reddish-brown, with the femora slightly darker; antennae reddish.

Head (Fig. 85) weakly transverse, 1.06 times as wide as long; punctation coarse and very dense, slightly sparser in posterior median portion of dorsal surface; interstices with shallow microsculpture only in anterior and posterior portions of dorsal surface, in most of dorsal surface much narrower than diameter of punctures. Eyes moderately large and rather weakly projecting from lateral contours of head, slightly shorter than postocular region in dorsal view.

Pronotum (Fig. 85) weakly transverse, approximately 1.07 times as wide as long and approximately as wide as head; punctation similar to that of head; midline impunctate.

Elytra (Fig. 85) long, approximately 1.1 times as long, and distinctly broader than pronotum; humeral angles marked; punctation dense and rather fine; interstices without distinct microsculpture. Hind wings apparently fully developed. Metatarsomere I longer than II, but distinctly shorter than the combined length of II and III.

Abdomen somewhat narrower than elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of sternite VII concave in the middle, on either side with comb of 7 palisade setae, between these combs bi-angularly produced (Fig. 86); sternite VIII (Fig. 87) with rather broad and deep, U-shaped posterior excision; aedeagus (Fig. 88) 0.65 mm long; apex of ventral process bilobed, these apical processes not distinctly overlapping and obliquely truncate apically.

Comparative notes

Based on the shape and chaetotaxy of the male sternite VII, as well as on the apically bilobed aedeagus, *M. shaanxiensis* belongs to the *M. ferrugineus* group. It is reliably distinguished from other dark-coloured macropterous representatives of this group only by the male primary and secondary sexual characters, from *M. perforatus* additionally by distinctly larger size and the relatively smaller eyes.

Distribution and natural history

The type locality is situated in the Qinling Shan, Shaanxi province, China (Fig. 62). The holotype was sifted from litter at an altitude of 1200–1400 m.

The *Medon brunneus* group

Medon brunneus (ERICHSON, 1839)

Material examined

Albania: 6 exs., Tiranë, 10 km ENE Tiranë, Mali Dajti, 41°22’N, 19°55‘E, 1160 m, mixed beech forest, litter sifted, 21.V.2010, leg. Assing (cAss); 5 exs., Elbasan, 13 km SE Elbasan, Mali i Shpatit, 41°03‘N, 20°13‘E, 1500 m, beech forest margin, sifted, 22.V.2010, leg. Assing (cAss); 1 ex., Pogradec, 18 km NNW Pogradec, S Q. e Hanës, 41°03‘N, 20°37‘E, 1000 m, pasture, oak shrubs sifted, 24.V.2010, V. Assing (cAss); 1 ex., Korçë, 37 km W Korçë, Mali i Ostrovikës, 40°40‘N, 20°21‘E, 1340 m, beech forest margin, beech litter and fern roots sifted, 26.V.2010, leg. Assing (cAss); 7 exs., Korçë, 10 km S Korçë, Mali i Gramozit, 40°32‘N, 20°48‘E, 1570 m, beech forest with poplar and juniper, sifted, 27.V.2010, leg. Assing (cAss); 4 exs., Korçë, 10 km S Korçë, Mali i Gramozit, 40°31‘N, 20°48‘E, 1550 m, moist beech forest margin, beech, fern, etc. sifted, partly near temporary stream, 27.V.2010, leg. Assing (cAss).

Turkey: Kırklareli: 2 exs., Demirköy, Dökümhane road, 3.X.2009, leg. Kunt (cAnl); 3 exs., Demirköy, Iğneada, Siğlioba, 3.X.2009, leg. Kunt (cAnl, cAss); 1 ex., Demirköy, Iğneada, Hamam Gölü, 2.X.2009, leg. Kunt (cAnl). Balıkesir: 7 exs., Kaz Dağı, NW Zeytinli, 39°42’N, 26°53’E, 1470 m, 11.IV.2010, leg. Brachat & Meybohm (cAss). Kocaeli: 4 exs., N Hereke, 40°49’N, 29°41’E, 460 m, 6.V.2012, leg. Brachat & Meybohm (cAss).

Comment

For a map illustrating the distribution of this widespread and common species see ASSING (2006). In Turkey, it is confined to the northwest.

Medon cauchoisi (JARRIGE, 1949)

Material examined

Spain: 1 ex., Andalucía, right bank of Guadalfeo river, near Orgiva, 2.–4.IV.2010, leg. Shavrin & Anishchenko (cSha). Morocco: 3 exs., Rif., N Bab-Taza, Talembote, 35°15’N, 5°12’W, 360 m, *Pistacia*, 8.V.2009, leg. Behne (SDEI); 1 ex., Rif, SW Oued-Laou, river E Laou, 35°18’N, 5°14’W, 210 m, 8.V.2009, leg. Behne (cAss).

Comment

The distribution of this Atlanto-Mediterranean species is illustrated by ASSING (2006).

Medon semiobscurus (FAUVEL, 1875)

Material examined

Greece: Rhódos: 1 ex., Agios Nikolaos, Fountoukli, 36°16’N, 28°00’E, 320 m, 3.IV.2012, leg. Meybohm (cAss); 1 ex., Epta Piges, 36°15’N, 28°07’E, 70 m, 3.IV.2012, leg. Meybohm (cAss); 19 exs., 5 km SW Embonas, Attaviros, 36°12’N, 27°49’E, 580 m, pine forest, litter sifted, 17.III.2013, leg. Assing (cAss); 13 exs., WSW Embonas, 36°15’N, 27°55’E, 340 m, moist and deep stream valley with *Acer* and other deciduous trees and bushes, moist leaf litter sifted, 17.III.2013, leg. Assing (cAss); 8 exs., 4 km W Apollona, 36°15’N, 27°55’E, 320 m, 5.IV.2012, leg. Meybohm (cAss); 3 exs., Monolithos, Akramitis, 36°10’N, 27°46’E, 300 m, pine forest with undergrowth, litter sifted, 21.III.2013, leg. Assing (cAss); 1 ex., 7 km NNE Laerma, 36°14’N, 27°58’E, 140 m, old pine forest with undergrowth, moist litter sifted, 19.III.2013, leg. Assing (cAss); 5 exs., Laerma, 36°09’N, 27°56’E, 240 m, leaf litter, 7.IV.2012, leg. Meybohm (cAss); 1 ex., Salakos spring, 36°17’N, 27°57’E, 100 m, 8.IV.2012, leg. Meybohm (cAss). Kos: 1 ex., Palio Pili env., 36°51’N, 27°11’E,190 m, 13.IV.2012, leg. Meybohm (cAss).

Turkey: Balıkesir: 2 exs., Kaz Dağı, Ayazma, 39°45’N, 26°51’E, 500 m, 11.IV.2010, leg. Brachat & Meybohm (cAss). Çanakkale: 1 ex., Kaz Dağı, Ayazma, 39°45’N, 26°54’E, 440 m, 11.IV.2010, leg. Brachat & Meybohm (cAss); 4 exs., Kurucam Tepe, 39°43’N, 27°11’E, 430 m, 14.IV.2010, leg. Brachat & Meybohm (cAss). Bursa: 2 exs., Karaorman, 39°55’N, 28°28’E, 440 m, 15.IV.2010, leg. Brachat & Meybohm (cAss). Isparta: 3 exs., 12 km N Sütçüler, 37°36’N, 30°59’E, 1100 m, oak forest, litter and grass, mostly between stones, sifted, 26.IV.2011, leg. Assing (cAss). Antalya: 4 exs. [partly teneral], pass 18 km NE Demirtas, 36°29’N, 32°23’E, 1550 m, 28.V.2006, leg. Kopetz (NME). Niğde: 6 exs., E Madenköy, 37°29’N, 34°42’E, 1200 m, 17.IV.2011, leg. Brachat & Meybohm (cAss). Adana: 1 ex., Belemedik, 37°23’N, 34°55’, 720 m, 15.IV.2011, leg. Brachat & Meybohm (cAss); 1 ex., Belemedik, 37°21’N, 34°55’, 710 m, 15.IV.2011, leg. Brachat & Meybohm (cAss); 5 exs., Belemedik, 37°20’N, 34°55’E, 690 m, 16.IV.2011, leg. Brachat & Meybohm (cAss); 5 exs., Belemedik, 37°21’N, 34°54’, 740 m, 16.IV.2011, leg. Brachat & Meybohm (cAss); 1 ex., 8 km S Feke, Akkaya, 37°46’N, 35°54’E, 760 m, 21.IV.2011, leg. Brachat & Meybohm (cAss); 2 exs., Feke, 21 km to Mansurlu, 37°51’N, 35°46’E, 965 m, 22.IV.2011, leg. Brachat & Meybohm (cAss).

Comment

This species is widespread and common in the East Mediterranean, its distribution bordering on - but apparently not overlapping with - that of the closely related *M. brunneus* in northwestern Turkey. The above specimen from Kos represents a new island record.

Medon piceus (Kraatz. 1858)

Material examined

Spain: 1 ex., Andalucía, Sierra Magina, Cerro Magina, 2000–2100 m, 26.–28.III.2010, leg. Shavrin & Anishchenko (cSha); 1 ex., Andalucía, San Pedro de Alcantara, 7.IV.2010, leg. Shavrin & Anishchenko (cSha).

Comment

For a map illustrating the expansive Atlanto-Mediterrean distribution of this species see Assing (2006).

The *Medon fusculus* group

Medon fusculus (Mannerheim, 1830)

Material examined

Slovenia: 2♀♀, Nanos, Ledeniski hrib, Cetinova koča, 900 m, in gravel and litter, 1.VI.2004, leg. Kahlen (TLMFI).

Greece: 5 exs., Serres, Alistrati cave, on bat guano, 10.V.1984, leg. Schönmann (NHMW, cAss).

Turkey: Sakarya: 2 exs., Geyve–Taraklı, 40°26‘N, 30°26‘E, 710 m, 26.IV.2012, leg. Brachat & Meybohm (cAss). Balıkesir: 1 ex., Kaz Dağı, NW Zeytinli, 39°42‘N, 26°53‘E, 1470 m, 15.IV.2010, leg. Brachat & Meybohm (cAss). Bursa: 1 ex., Karaorman, 39°55‘N, 28°28‘E, 440 m, 15.IV.2010, leg. Brachat & Meybohm (cAss). Isparta: 1 ex., Sultan Dağları, 15 km SSW Akşehir, Cankurtaran, 38°15‘N, 31°24‘E, 1860 m, under stones, 17.IV.2011, leg. Assing (cAss); 1 ex., 43 km ESE Eğirdir, Dedegöl Dağları, 5 km W Yenişarbademli, 37°43‘N, 31°19‘E, 1820 m, flooded pasture and calcareous slope, under stones, 25.IV.2011, leg. Assing (cAss). Niğde: 2 exs., E Madenköy, 37°29‘N, 34°42‘E, 1200 m, 17.IV.2011, leg. Brachat & Meybohm (cAss); 2 exs., E Madenköy, 37°28‘N, 34°40‘E, 1330 m, 17.IV.2011, leg. Brachat & Meybohm (cAss); 2 exs. [1♂ with teratologically deformed aedeagus], E Madenköy, 37°27'N, 34°39'E, 1615–1870 m, 17.IV.2011, leg. Brachat & Meybohm (cAss). Hatay: 1 ex., Narhca vill., Narhca cave (cAnl). Malatya: 1 ex., Hekimhan, Ipekyölu, Girmana, 40°41'N, 40°39'E, 25.VII.2007, leg. Yağmur (cAnl).

Comment

This Ponto-Mediterranean species is widespread from the Middle East to France and the British Isles; for a map see Assing (2006). One of the males from Niğde has a teratologically deformed aedeagus.

Medon sardous Dodero, 1922

Material examined

Italy: Sardegna: 9 exs., Monte Arci, 12 km NE Terralba, Genna Spina, 39°48'N, 8°45'E, 710 m, oak forest, litter sifted, 27.XII.2012, leg. Assing (cAss); 1♂, Nuoro, Lanusei, Bosco Selene, 39°52'N, 9°31'E, 900 m, 30.III.2013, leg. Meybohm (cAss); 7♂♂, 1♀, Nuoro, 6 km S Lanusei, 39°51'N, 9°33'E, 340 m, 25.III.2013, leg. Meybohm (cAss, MNHUB); 2♀♀, same data, but 26.III. (MNHUB); 2♂♂, 2♀♀, same data, but 4.IV. (cAss, MNHUB).

Comment

Medon sardous is endemic to Sardinia (Assing 2006).

Medon lanugo Assing, 2004

Material examined

Turkey: 8 exs., Niğde, E Madenköy, 37°29'N, 34°42'E, 1200 m, 17.IV.2011, leg. Brachat & Meybohm (cAss); 1 ex., Niğde, E Madenköy, 37°28'N, 34°40'E, 1330 m, 17.IV.2011, leg. Brachat & Meybohm (cAss); 2 exs., Niğde, E Madenköy, 37°27'N, 34°39'E, 1615–1870 m, 17.IV.2011, leg. Brachat & Meybohm (cAss); 5 exs., Adana, 11 km NE Feke, Cumhurlu, 37°53'N, 36°00'E, 710 m, 21.IV.2011, leg. Brachat & Meybohm (cAss), 1 ex., Adana, Belemedik, 37°20'N, 34°55', 690 m, 16.IV.2011, leg. Brachat & Meybohm (cAss).

Comment

Medon lanugo is widespread and rather common in Turkey (Assing 2004a, 2005a, 2009).

Medon meybohmi Assing, 2007

Material examined

Turkey: 4 exs., Adana, Feke, 21 km to Mansurlu, 37°51'N, 35°46'E, 965 m, 22.IV.2011, leg. Brachat & Meybohm (cAss).

Comment

The known distribution of this species is confined to the environs of Feke in Adana province, central southern Anatolia (Assing 2007b, 2009). For a distribution map see Assing (2009).

Medon lydicus Bordoni, 1980

Material examined

Greece: Rhódos: 6 exs., 4 km W Apollona, 36°15'N, 27°55'E, 320 m, 5.IV.2012, leg. Meybohm (cAss); 1 ex., 2 km W Apollona, 36°15'N, 27°57'E, 320 m, 5.IV.2012, leg. Meybohm (cAss); 25 exs., WSW Embonas, 36°15'N, 27°55'E, 340 m, moist and deep stream valley with *Acer* and other deciduous trees and bushes, moist leaf litter sifted, 17.III.2013, leg. Assing (cAss, MNHUB).

Turkey: 1 ex., Kırklareli, Demirköy, Dökümhane road, 3.X.2009, leg. Kunt (cAnl).

Comment

The distribution of *M. lydicus* ranges from western Anatolia and the Greek islands Rhodes, Samos, Ikaria, and Lesbos across Bulgaria to Serbia (Assing 2004a, 2005a, 2005b, 2007a). For a map see Assing (2009).

Medon abantensis Bordoni, 1980

Material examined

Turkey: 1 ex., Malatya, Hekimhan, Ipekyölu, Girmana, 40°41'N, 40°39'E, 25.VII.2007, leg. Yağmur (cAnl).

Comment

The distribution of *M. abantensis* ranges from western Anatolia (Izmir) to Georgia (Assing 2004a, 2004b, 2007a, 2009); a map is provided by Assing (2009).

Medon fusculoides Coiffait, 1969

Material examined

Iran: Lorestan: 5 exs., 15 km NE Alashtar, Mt. Garri, 33°58'N, 48°20'E, 19j00 m, 16.X.2011, leg. Frisch (MNHUB, cAss); 9 exs., 35 km E Kuhdasht, Kashkan, 33°35'N, 47°53'E, 1010 m, 17.X.2011, leg. Frisch (MNHUB, cAss); 1 ex., 30 km E Kuhdasht, 33°35'N, 47°51'E, 1080 m, 17.X.2011, leg. Frisch (MNHUB). Gilan: 7 exs., S Astara, Lavandvil, 38°18'N, 48°50'E, 30 m, 10.X.2011, leg. Frisch (MNHUB, cAss). Ilam: 16 exs., 16 km NNW Eyvan, 33°57'N, 46°14'E, 1150 m, 18.X.2011, leg. Frisch (MNHUB, cAss). Chahar-Mahal-o-Bakhtiyari: 2 exs., Dehdez–Gandoman, 37 km N Sar Khun, 31°55'N, 50°36'E, 1480 m, 14.V.2010, leg. Frisch (MNHUB, cAss). Kerman: 7 exs., pass Mahan–Sirch, Banan mts., 30°12'N, 57°24'E, 2800 m, 20.V.2010, leg. Frisch & Serri (MNHUB, cAss); 4 exs., Kerman–Kuhpaye, Darbasiab, Banan mts., 30°31'N, 57°10'E, 2470 m, 19.V.2010, leg. Frisch & Serri (MNHUB); 1 ex., Rayen–Darb Behesht, 6 km W Goruh, 29°22'N, 57°19'E, 2870 m, 28.V.2010, leg. Frisch (MNHUB).

Comment

The distribution of *M. fusculoides* ranges from eastern Anatolia to southern and eastern Iran. For a recent distribution map see Assing (2009).

Medon ripicola (Kraatz, 1854)

Material examined

Romania: 1 ex., Valea Cernei, confluence of Cerna and stream Arsasca, 45°03'N, 22°36'E, 390 m, floated from coarse sand heaps and debris, 11.IV.2006, leg. Makranczy (HNHM).

Comment

The distribution of *M. ripicola* is of the expansive Atlanto-Mediterranean type and ranges from Northwest Africa, the Atlantic Islands (Canary Islands, Madeira, Azores) across most of Europe to Bulgaria. Confirmed records from the southeast of the distribution are scarce.

***Medon umbilicatus* Cameron, 1924**

(Figs 89–96, 103)

Medon umbilicatus Cameron, 1924: 184 f.
Medon trapeziphallus Coiffait, 1975: 176 ff., **syn. n.**

Type material examined

M. umbilicatus: Lectotype ♂, present designation: "Theog 7600′, Simla Hills. Dr. Cameron. IX.1921. / Medon umbilicatus Cam. / Type H.T. / Syntype / M. Cameron Bequest. B.M. 1955-147 / Lectotypus ♂ *Medon umbilicatus* Cameron, desig. V. Assing 2011" (BMNH). Paralectotype ♂ [teneral]: "Kotgarh 7000′, Simla Hills. / Dr. Cameron. 19.IX.1921. / Medon umbilicatus / Syntype / M. Cameron Bequest. B.M. 1955-147" (BMNH).

Comment

The original description is based on an unspecified number of syntypes from "Mussorie, Chakrata and Simla Districts" (Cameron 1924). Two males, one of them teneral, were located in the Cameron collection at the BMNH. The mature male is designated as the lectotype.

Medon trapeziphallus was described from a single male from "Népal central, Dinguari Kola-Tal, au-dessus de Trisuli Basar" (Coiffait 1975). Based on the details indicated in the description and the illustrations of the male primary and secondary sexual characters the holotype is undoubtedly conspecific with *M. umbilicatus*.

Additional material examined

India: 4 exs., Uttarakhand, 5 km NE Govind Ghat, road to Ghangaria, 9.–10.VI.2011, leg. Shavrin (cSha, cAss); 2 exs., Uttaranchal, Nainital env., 19.–21.VI.2003, leg. Kejval & Trýzna (NHMW, cAss); 2 exs., Himachal Pradesh, Chaupal ["Chopal"; ca. 30°57'N, 77°35'E]–Khanga, Nallah, 2250 m, 7.V.1977, leg. Wittmer & Brancucci (NHMB); 1♀, Himachal Pradesh, Manali, 2000–2300 m, 14.V.1977, leg. Wittmer & Brancucci (NHMB).

Pakistan: 3♂♂, 3♀♀ [2♀♀ without head and pronotum], Northern Areas, Gilgit [approx. 35°54'N, 74°17'E], Kargah Valley, 26.X.2008, leg. Latella (MCSNV, cAss); 1♂: Northern Areas Gilgit, Kargah Valley, Neelo Kho (Cavern), 1650 m, 26.X.2008, leg. Latella (MCSNV).

Redescription

Body length 4.3–5.5 mm. Habitus as in Fig. 89. Coloration: body dark-brown to blackish, with the elytra and the margins of the pronotum often reddish; legs, except the somewhat infuscate femora, and antennae reddish. Coloration of type specimens: forebody blackish-brown, with the humeral angles and the postero-lateral angles of the elytra indistinctly paler; abdomen dark-brown, with the paratergites and the posterior margins of segments VII and VIII reddish; legs and antennae reddish.

Head (Fig. 90) approximately as wide as long; lateral margins convex in dorsal view; posterior angles broadly rounded; punctation moderately coarse, areolate, and very dense; interstices reduced to narrow ridges. Eyes weakly convex, approximately as long as or little more than half as long as postocular region in dorsal view.

Pronotum (Fig. 90) approximately 1.05 times as wide as long and 0.90–0.95 times as wide as head; punctation similar to that of head; midline narrowly impunctate, often more or less reduced anteriorly and posteriorly.

Elytra (Fig. 90) long, 1.05–1.10 times as long as pronotum; humeral angles marked; punctation very dense and much finer than that of head and pronotum. Hind wings fully developed. Protarsi only indistinctly dilated.

Abdomen distinctly narrower than elytra; punctation dense and very fine; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of sternite VII deeply and broadly, almost semi-circularly excised, apical margins of this excision each with comb of 6–7 palisade setae (Fig. 91); posterior excision of sternite VIII deep, broad, and of almost semi-circular shape (Fig. 92); aedeagus (Figs 93–96) approximately 0.65 mm long, ventral process of trapezoid shape in ventral view.

Intraspecific variation

The material from Pakistan is distinguished from the type material by slightly different coloration and by the slightly different shape of the ventral process of the aedeagus (Figs 83–86). However, otherwise no convincing evidence was found suggesting that the populations from Pakistan and North India should represent different species, so that the observed differences are attributed to intra- rather than interspecific variation.

Comparative notes

Based on the shapes and chaetotaxy of the male sternites VII and VIII, as well as on the morphology of the aedeagus, *M. umbilicatus* undoubtedly belongs to the *M. fusculus* species group. At present, *M. umbilicatus* is the sole representative of this group in the East Palaeactic region.

Distribution and natural history

This species has been recorded, partly as *M. trapeziphallus*, from northern India (Uttaranchal, Uttarakhand, Himachal Pradesh), Nepal, Kashmir, and Pakistan (CAMERON 1924; COIFFAIT 1975, 1982a, b; SMETANA 2004; material examined). The currently known distribution is illustrated in Fig. 103. The examined type specimens, one of them teneral, were collected at altitudes of approximately 2130 and 2300 m in September. One of the specimens seen from Pakistan was found in a cavern at 1650 m.

Species incertae sedis

Medon flavomarginatus sp. n.

(Figs 97–103)

Type material

Holotype ♂: "Nepal, Prov. Gandaki, Manaslu Mts., Bara Pokhari Lekh, Chhandi Khola Valley, 11.–12. IV.2003, 200–2300 m NN, leg. Schmidt / Holotypus ♂ *Medon flavomarginatus* sp. n. det. V. Assing 2012" (NME). Paratype ♂: "Nepal Manaslu Mts., 28°22'N 84°29'E, E slope of Ngali Khola Vall., 2000–2300 m, leg. Schmidt 15.V.2005" (cAss); 1♀: "Nepal-Himal. 25.09.92, O Annapurna, Tal bis Bagarchhap, 1700-2200 m, leg. J. Schmidt" (SDEI).

Etymology

The specific epithet (Latin, adjective: with yellow margins) refers to the conspicuous coloration of the elytra.

Description

Body length 4.2–5.1 mm; length of forebody 2.4–2.9 mm. Habitus as in Fig. 97. Coloration: body blackish, posterior margins and postero-lateral angles of elytra bright yellowish, humeral angles of elytra more or less distinctly paler; legs brown with blackish-brown femora; antennae dark-brown with antennomeres I and II reddish.

Head (Fig. 98) weakly oblong, approximately 1.05 times as long as wide, and of subrectangular shape, indistinctly narrowed behind eyes; posterior angles marked; punctation conspicuously coarse and dense; interstices distinctly narrower than punctures and without microsculpture. Eyes rather large, slightly more than half the length of postocular region in dorsal view. Anterior margin of labrum without teeth on either side of the median excision.

Pronotum (Fig. 98) indistinctly oblong, approximately as long as wide and as wide as head; punctation similar to that of head; midline with smooth impunctate band in posterior half.

Elytra (Fig. 98) large, approximately as long as, and distinctly broader than pronotum; punctation very dense and relatively coarse; interstices without microsculpture. Hind wings fully developed. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen narrower than elytra; punctation dense; interstices with very shallow, barely noticeable microsculpture and glossy; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 99) with sparse long submarginal setae, pubesence otherwise unmodified, posterior margin weakly concave; sternite VIII (Fig. 100) weakly oblong, posterior excision broad and shallow; aedeagus (Figs 101–102) 0.95 mm long, with long and slender ventral process of distinctive shape.

Comparative notes

Medon flavomarginatus is distinguished from its congeners by a number of characters, the conspicuously coarse and dense punctation of the head and pronotum, the coloration of the elytra, and the male sexual characters, particularly the absence of modified setae at the posterior margin of sternite VII, the shallow posterior excison of sternite VIII, and the distinctive shape of the ventral process of the aedeagus. The male sexual characters resemble those of the genus *Sunius* STEPHENS, 1829. However, unlike at least the Palaearctic representatives of this genus, *M. flavomarginatus* lacks tooth-like processes on either side of the median excision of the labral anterior margin. Nevertheless, the generic assignment must be considered somewhat tentative.

Distribution and natural history

The specimens were collected in two localities in the Manaslu range and one in the Annapurna range, central Nepal (Fig. 103), at altitudes between approximately 2000 and 2300 m in April, May, and September.

Species excluded from *Medon*

Luzea rubecula (Sharp, 1889), comb. n.
(Fig. 104)

Medon rubeculus Sharp, 1889: 264.
Luzea valida Assing, 2011b: 247 ff.; **syn. n.**

Type material examined
Medon rubeculus: Lectotype ♀, present designation: "Medon rubeculus. Type D.S. Iwaki. Japon, Lewis. [handwritten on mounting label] / Type / Japan. G. Lewis / Sharp Coll. 1905-313 / Lectotypus ♀ *Medon rubeculus* Sharp, desig. V. Assing 2013 / Luzea rubecula Sharp, det. V. Assing 2013" (BMNH).

Additional material examined
Russia: 2♂♂, Krasnodarskiy Kray, Centralniy district, right side of Psakhe river mouth near sea, 18.–19.IX.2008, leg. Enustschenko (cSha, cAss).

Comment
The original description of *Medon rubeculus* is based on "two badly preserved females" from "Iwaki and Sapporo" (Sharp 1889). One of these syntypes was located in the Sharp collection at the BMNH. The specimen is designated as the lectotype. *Luzea valida* was described from two males collected on a beach in Zhejiang, East China (Assing 2011b). In a recent article, Kim et al. (2011) illustrated some external and the male sexual characters of *Medon rubeculus*, based on material collected in Korea. The aedeagus appeared to be identical to that of *Luzea valida*. A subsequent examination of one of the two syntypes of *M. rubeculus*, now the lectotype, and a comparison with the holotype of *L. valida* revealed no significant characters suggesting that these specimens should represent different species, so that *L. valida* is placed in synonymy with *M. rubeculus*. As can be inferred especially from the primary and secondary sexual characters, the species belongs to *Luzea*.

The above specimens from the Russian Black Sea coast considerably expand the distribution of *L. rubecula* towards the west and represent the first record from the West Palaearctic region. The vast distribution of this species is illustrated in Fig. 104.

Checklist of the *Medon* species of the Palaearctic region

In the checklist, the species are listed by species groups and sorted alphabetically within each species group. The species of doubtful generic and intrageneric affiliations are listed separately.

In the references column, previous contributions containing information on the species and subspecies are listed. Articles providing descriptions, illustrations, distribution maps, or containing taxonomic changes are underlined. The references are abbreviated as follows: A98 = Assing (1998); A04a = Assing (2004a); A04b = Assing (2004b), A05a = Assing (2005a); A05b = Assing (2005b); A06 = Assing (2006); A06 = Assing (2007a); A06 = Assing (2007b); A07c = Assing (2007c); A09 = Assing (2009); A10 = Assing (2010); A11a = Assing (2011a); A11c = Assing (2011c); A11d = Assing (2011d); A12 = Assing (2012); App = present paper; AF12 = Assing & Feldmann (2012); AW01 = Assing & Wunderle (2001).

Footnotes: 1) male unknown; 2) names doubtful, types unavailable, possibly lost; 3) probably a synonym of *M. sparsiventris*; 4) type locality not identified

Taxon	**Distribution**	**References**
***apicalis* group**		
annapurnae sp. n.	Nepal: Annapurna	App
apicalis (Kraatz, 1857) = *orgianus* Bordoni, 1980	expansive Atlanto-Mediterranean: NW Africa, Canaries, and Sicily to North Europe and NW-Balkans	A04a, A04b, A06, A09, A10, App
beydaghensis Fagel, 1969	Southwest Turkey	A04a, A04b
biapicalis sp. n.	Nepal: Manaslu	App
bifidus sp. n.	Nepal: Manaslu	App
bucharicus Bernhauer, 1902	Middle Asia: Uzbekistan, Tajikistan, Kyrgyzstan	A04b, A06, A09, App
caricus Fagel, 1970 = *marmaridis* Franz, 1987	Southwest Turkey; Greece: Nikariá	A04a, A07a, App

cerrutii Coiffait, 1976	Greece: Crete, Kárpathos	A04a, A06, A07a, App
corniger sp. n.	North India; China: Yunnan	App
deharvengi Coiffait, 1982	Nepal: Annapurna	A10, App
dhaulagiricus sp. n.	Nepal: Dhaulagiri	App
excavatus sp. n.	Greece: Pelopónnisos	App
feloi Assing, 1998	Canary Islands: La Palma	A98, A06
gratus Cameron, 1931 = *reuteri* Feldmann, 2007	North India; Afghanistan	A11a
Taxon	**Distribution**	**References**
guignoti Coiffait, 1987 = *coriaceus* Coiffait, 1970	Greece; Bulgaria; Macedonia	A04a, A06, App
impar Assing, 2004	Greece: Rhodes	A04a, A07a, App
indigena (Wollaston, 1857)	Madeira, Porto Santo	A06
inexcisus sp. n.	Nepal: Annapurna	App
jaljalensis (Coiffait, 1984)	East Nepal: Jaljale Himal	A12
manasluensis Assing, 2010	Nepal: Manaslu	A10, App
maronitus (Saulcy, 1865) = *marmarisensis* Fagel, 1970 = *alexandrinus* Bordoni, 1980 = *turcmenus* Gusarov, 1995	Southern Balkans; Cyprus; Turkey; Middle East; Caucasus; Turkmenistan	A04a, A04b, A05b, A07a, A07b, A09, App, AF12, AW01
oromii Assing, 2006	Canary Isl.: Gran Canaria, La Palma	A06, A09
perniger Coiffait, 1978 = *fraudulentus* Coiffait, 1978	Adriato-Mediterranean: from Sicily and Sardina to North Italy, Southwest France and Switzerland	A06, A09, A10
petrochilosi Coiffait, 1970 = *croaticus* Toth, 1980	Greece; Croatia; Macedonia	A04a, A09, App
prolixus (Sharp, 1874)	Japan; Russian Far East; South Korea	Kim et al. (2011)
reliquus Assing, 2007	West Turkey	A07c
schawalleri sp. n.	E-Nepal: Solukhumbu	App
seleucus Bordon, 1980	South Turkey: Hatay, Osmaniye	A04a, A04b; A07b, A09, App
sericellus (Fairmaire, 1860) = *troglophilus* (Jeannel & Jarrige, 1949) = *besucheti* (Bordoni, 1980)	North Algeria; Northwest Tunisia	A06
subquadratus Assing, 2004	South Turkey: Mersin	A04a, A06, App
***ferrugineus* group**		
africanus (Fauvel, 1872) = *bodemeyeri* Bernhauer, 1915	North Africa: Algeria, Tunisia	A06, A09, A10, App
antricola Assing, 2006	Canary Islands: El Hierro	A06, A09
augur Fauvel, 1906[1]	Corsica	A06
castaneus (Gravenhorst, 1802) = *brevicornis* (Latreille, 1804) = *quadratus* (Beck, 1817) = *ruddii* Stephens, 1833	Atlanto-Mediterranean: Iberian Peninsula to North and Central Europe, North Italy, West Russia, and Ukraine	A04b, A06, A09
dilutus cephalus Koch, 1938 = *boeticus* Jeannel & Jarrige, 1949	Atlanto-Mediterranean: West Europe; Sardinia	A06, A07b, A09, A10, App
dilutus dilutus (Erichson, 1839) = *meridionalis* Bordoni, 1980 = *oppidanus* (Kraatz, 1857)	Adriato-Mediterranean: Italy; Central Europe	A06, A07a, A09, A10, App

dilutus pythonissa (Saulcy, 1865) = *robustior* Roubal, 1920 = *haafi* Scheerpeltz, 1956 = *macedonicus* Coiffait, 1976 = *mersinus* Bordoni, 1980a = *mersinus* Bordoni, 1980b	Ponto-Mediterranean: Southern Balkans (Greece, incl. islands, Macedonia, Bulgaria); Turkey; Cyprus; Middle East; Caucasus; North Black Sea region	A04a, A04b, A05b, A06, A07a, A07b, A09, A10, App, AW01
dilutus quadriceps (Wollaston, 1864) = *vitalei* Bernhauer, 1936 = *eremicus* Koch, 1939 = *marocanus* Coiffait, 1970 = *mateui* Coiffait, 1973	North Africa; Sicily; Canary Islands; Azores?	A06, A09
dilutus spelaeus (Scriba, 1870)[2] = *breuili* Jeannel, 1921	South Spain	A06
Taxon	**Distribution**	**References**
exquisitus Kirshenblat, 1951[2]	Armenia, Lebanon	App
ferrugineus (Erichson, 1840) = *brancsiki* (Eppelsheim, 1880) = *nitidus* (Petri, 1891) = *orduanus* Bordoni, 1980	Ponto-Mediterranean: Turkey; Balkans; southeastern Central Europe	A04a, A07a, A07b, A09, App
niger Cameron, 1924 = *punctatus* (Coiffait, 1975), syn. n. = *raraensis* Coiffait, 1982, syn. n.	North India; Nepal	A11a, App
perforatus sp. n.	China: Zhejiang	App
pocofer (Peyron, 1858) = *maritimus* (Aubé, 1863)	coasts of Atlantic Ocean northwards to southern England; coasts of West Mediterranean eastwards to Montenegro; Russia: Krasnodar	A04a, A06, App
procerus (Pérez-Arcas, 1874)	Spain: Madrid	A06, A07b
rufiventris (Nordmann, 1837) = *incertus* Mulsant & Rey, 1878 = *anatolicus* Coiffait, 1970 = *aquitanicus* Coiffait, 1970 = *burdigalensis* Coiffait, 1970 = *sicilianus* Coiffait, 1970 = *siculus* Coiffait, 1970	Ponto-Mediterranean: Turkey and Black Sea region to Spain and southern North Europe	A04a, A05b, A06, A07a, A07b, A09, A10
shaanxiensis sp. n.	China: Shaanxi	App
subcoriaceus (Wollaston, 1864)	Canary Islands	A06, A09, App
varamontis sp. n.	Azores: São Miguel	App
vicentensis Serrano, 1993	Madeira	A06
***brunneus* group**		
brunneus (Erichson, 1839) = *megacephalus* (Heer, 1839) = *monticola* (Hampe, 1867) = *olympicus* Scherpeltz, 1963	probably Ponto-Mediterranean: Northwest Turkey; Balkans (incl. Crete); Italy; Central Europe; Northeast Spain; France; southern North Europe	A04a, A04b, A06, A07a, A09, A10, App
cauchoisi Jarrige, 1949 = *oculatior* Peyerimhoff, 1949 = *lusitanicus* Coiffait, 1970 = *mazices* Coiffait, 1973 = *parviphallus* Coiffait, 1973 = *fongondi* Coiffait, 1980 = *perraulti* Coiffait, 1980	Atlanto-Mediterranean: from Northwest Africa across Iberian Peninsula northeastwards to Southwest France.	A06, A07a, A07b, A09, A10, App
despectus Fairmaire, 1860	North Africa: Algeria, Tunisia; Italy: Pantelleria	A04b, A06, A09

mirei Coiffait 1980 = *giachinoi* Bordoni, 1988	Algeria	A06
piceus (Kraatz 1858) = *muscicola* Mulsant & Rey, 1878 = *murciensis* Coiffait, 1970	Atlanto-Mediterranean: Iberian Peninsula to South Britain and eastern Central Europe	A06, A07a, A09, A10, App
semiobscurus (Fauvel, 1875) = *ruber* J. Sahlberg, 1908 = *sahlbergi* Scheerpeltz, 1933 = *rhodiensis* Scheerpeltz, 1963 = *clambus* Fagel, 1969	Turkey; Middle East; Greece: Rhodes, Samos, Kos	A04a, A04b, A05b, A07a, A07b, A09, A10, App, AF12
***fusculus* group**		
abantensis Bordoni, 1980a = *abantensis* Bordoni, 1980b	North Turkey; West Caucasus	A04a, A04b, A07a, A09, App
beroni Coiffait, 1970	Greece: Crete	A04a, A06,
Taxon	**Distribution**	**References**
cyprensis Assing & Wunderle, 2001	Cyprus	A04a, AW01
dobrogicus Decu & Georgescu, 1994	Romania	A04a
frischi Assing, 2005	Iran	A05a, A07a
fusculoides Coiffait, 1970 = *amidanus* Bordoni, 1978	East Turkey; Armenia; Iran	A04a, A05a, A06, A07a, A07b, A09, App
fusculus (Mannerheim, 1830) = *fusculus* (Lacordaire, 1835) = *testaceus* (Lacordaire, 1835) = *rufus* (Mulsant & Rey, 1853) = *auraniticus* (Saulcy, 1865) = *infuscatus* (Baudi di Selve, 1870) = *deficiens* Hubenthal, 1911 = *abchasicus* Bernhauer, 1923 = *bulgaricus* Coiffait, 1970 = *gajaci* Coiffait, 1973 = *paradobrogicus* Decu & Georgescu, 1994	expansive Ponto-Mediterranean: from the Middle East, Turkey, the Black Sea region across the Balkans and Central Europe to France and South Britain	A04a, A04b, A06, A07a, A07b, A09, A10, App, AF12
kabylicus Assing, 2006	Algeria	A06
kopetdaghi Gusarov, 1995[3)]	Turkmenistan	A04a
lamellatus Assing, 2004	Central and South Turkey	A04a, A04b
lanugo Assing, 2004	Turkey	A04a, A04b, A06, A07b, A09, App
lindbergi Scheerpeltz, 1958 = *scheerpeltzianus* Fagel, 1966 = *loebli* Bordoni, 1980	Middle East: South Turkey to Israel	A04a, A04b, A07a, A07b, A09, A10
lydicus Bordoni, 1980 = *mimulus* Fagel, 1970 = *umbilicatus* Coiffait, 1970 = *choparti* Coiffait, 1987 = *rhodicus* Franz, 1987	Serbia, Bulgaria; West Turkey; Greece: Rhodes, Samos, Ikaria, Lesbos	A04a, A05b, A06, A07a, A09, App
meybohmi Assing, 2007	South Turkey: Adana	A07b, A09, App
paradisiacus Assing, 2004	Azerbaijan, Iran	A04a, A05a, A07a,
ripicola (Kraatz, 1854) = *kellneri* (Kraatz, 1875) = *pectiniventris* Donisthorpe, 1932	expansive Atlanto-Mediterranean: North Africa, Canary Islands, Madeira, Azores, Iberian Peninsula, Sicily to southern North Europe, Central Europe, southeastwards to Bulgaria and Macedonia	A04a, A06, A07a, A07b, A09, App
sardous Dodero, 1922	Italy: Sardinia	A06, App
sequax Assing, 2004	Armenia	A04a

serriae Assing, 2007	South Iran	A07a, A07b, A09
solitarius Assing, 2009	South Turkey: Kahramanmaraş	A09
sparsiventris Eppelsheim, 1889 = *frater* Bernhauer, 1923 = *wittmeri* Coiffait, 1976	North Iran; Azerbaijan	A04a, A06, A09, A10
subfusculus Fagel, 1969 = *besucheti* Bordoni, 1980	South Turkey; Greece: Kos	A04a, A09
umbilicatus Cameron, 1924 = *trapeziphallus* Coiffait, 1975, syn. n.	North India; Nepal; Kashmir; Pakistan	App
***Medon* incertae sedis**		
flavomarginatus sp. n.	Nepal: Manaslu	App
molestus Roubal, 1920 1)	“Platiessa” 4)	A04b
subterraneus Coiffait, 1970 2)	Spain: Ibiza	A06
Taxon	**Distribution**	**References**
Medonina incertae sedis		
basipennis Bernhauer, 1927	Japan	
bhutanicus Coiffait, 1978	Bhutan	
birmanus Fauvel, 1895 = *asperulus* Cameron, 1924	North India; Myanmar	
breviusculus (Kraatz, 1859)	North India; Sri Lanka	
castaneipennis Cameron, 1924	North India: Himachal Pradesh	
cinnamopterus (Kraatz, 1859) = *orientalis* Cameron, 1920 = *chatterjeei* Cameron, 1924 = *renominatus* Cameron, 1925	North India, Malay Peninsula, Sumatra, Borneo	
compressiphallus Coiffait, 1978	Bhutan	
confertus Sharp, 1889	Japan, Taiwan	
discedens Sharp, 1889	Japan	
dolorosus Cameron, 1924	North India	
exasperatus Cameron, 1924	North India	
fauveli Bernhauer & Schubert, 1912 = *luctuosus* Fauvel, 1895	North India, Myanmar	
franzi Coiffait, 1975	Nepal	
fungi Cameron, 1943	North India	A11a
ghumensis Cameron, 1943	North India	A11a
goropanensis Coiffait, 1975 1)	Nepal	
labralis (Cameron, 1943)	North India	A11c
laticeps Rambousek, 1917	China	
lewisius (Sharp, 1874)	Japan, Taiwan	
melancholicus Cameron, 1943	North India	
morosus Cameron, 1943	North India	
nepalensis Coiffait, 1975	Nepal	
opacellus Fauvel, 1895	North India; Myanmar; Laos; Singapore; Sumatra	
parkeri Cameron, 1924	North India	
planus (Kraatz, 1859) = *humeralis* (Motschulsky, 1858) = *planatus* Bernhauer, 1916	North India; Hong Kong; Philippines: Luzon, Palawan	
rangpoensis Biswas, 2003	North India	

rufoferrugineus CAMERON, 1924	North India	
siwalikensis CAMERON, 1931	North India	
spadiceus SHARP, 1889	Japan	
submaculatus SHARP, 1889	Japan; Taiwan	
sulcifrons BERNHAUER, 1907	Japan	

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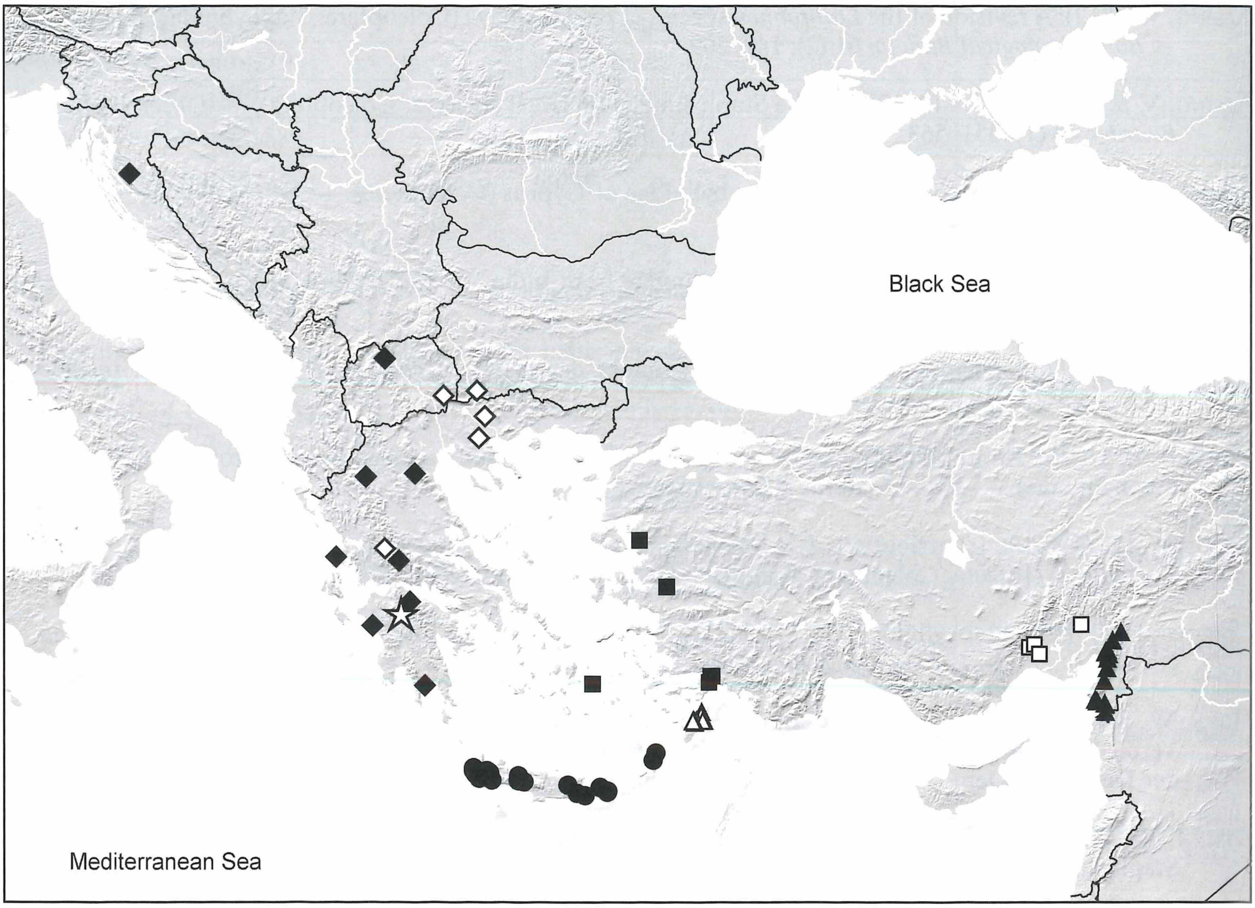
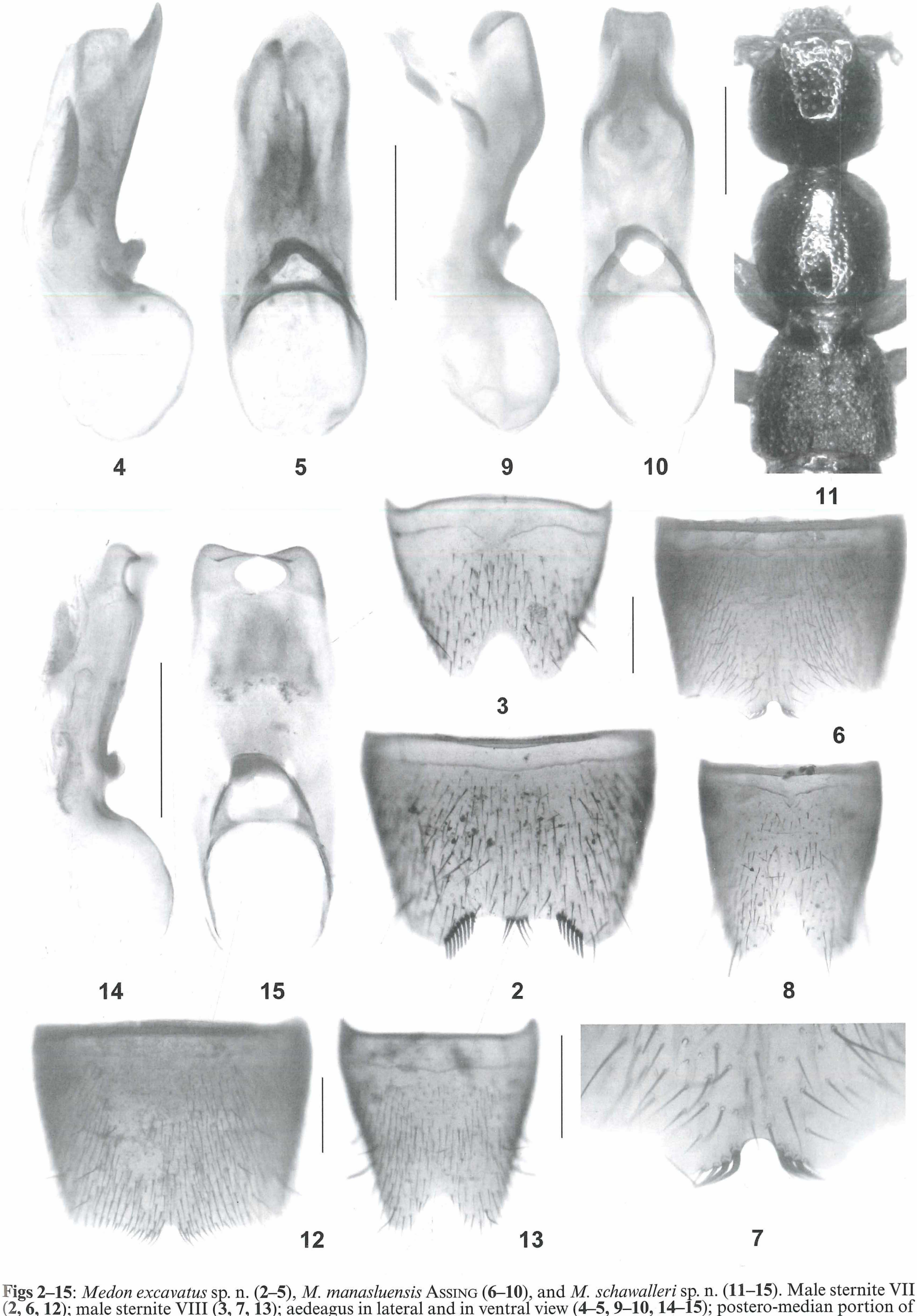
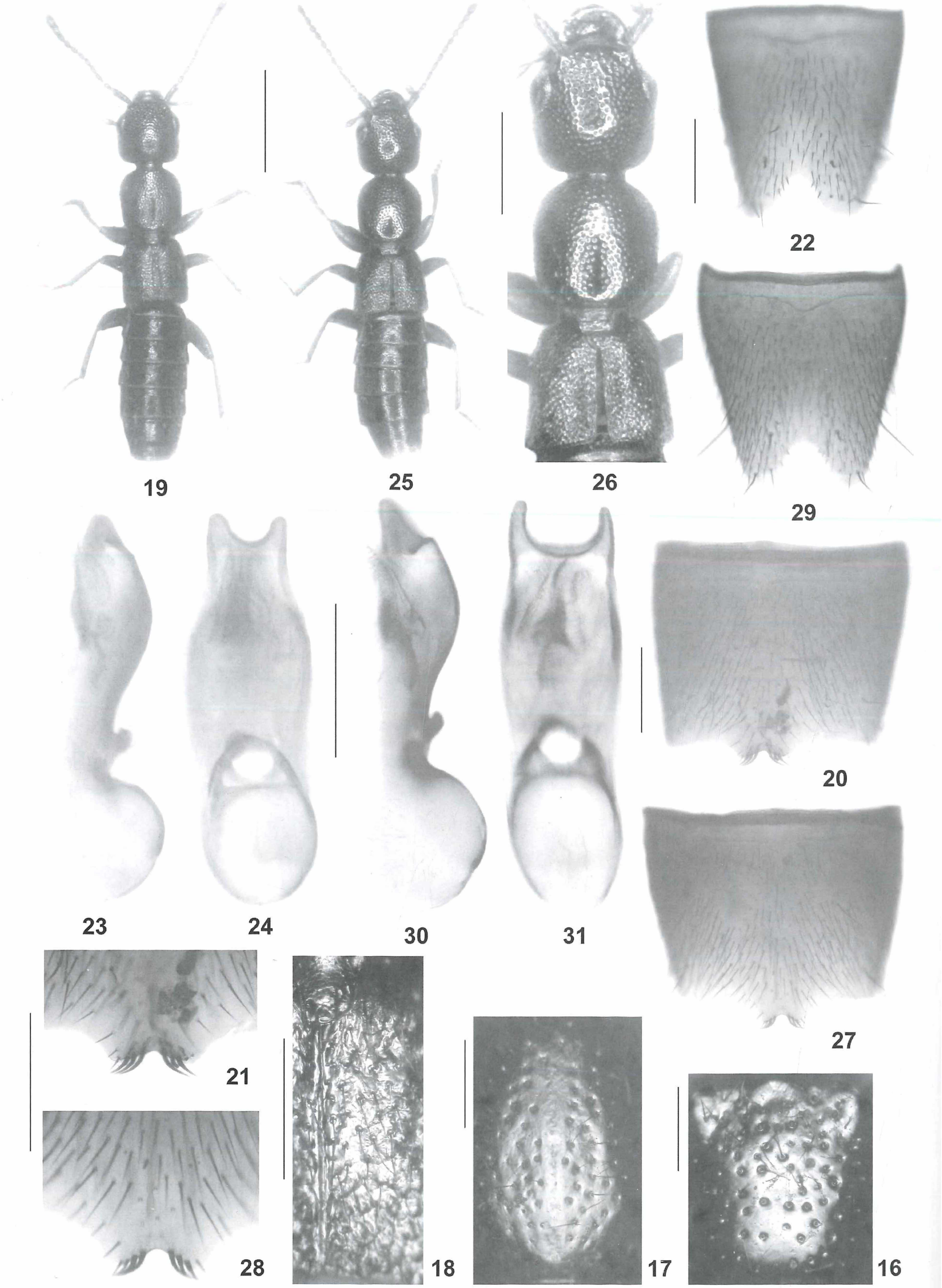


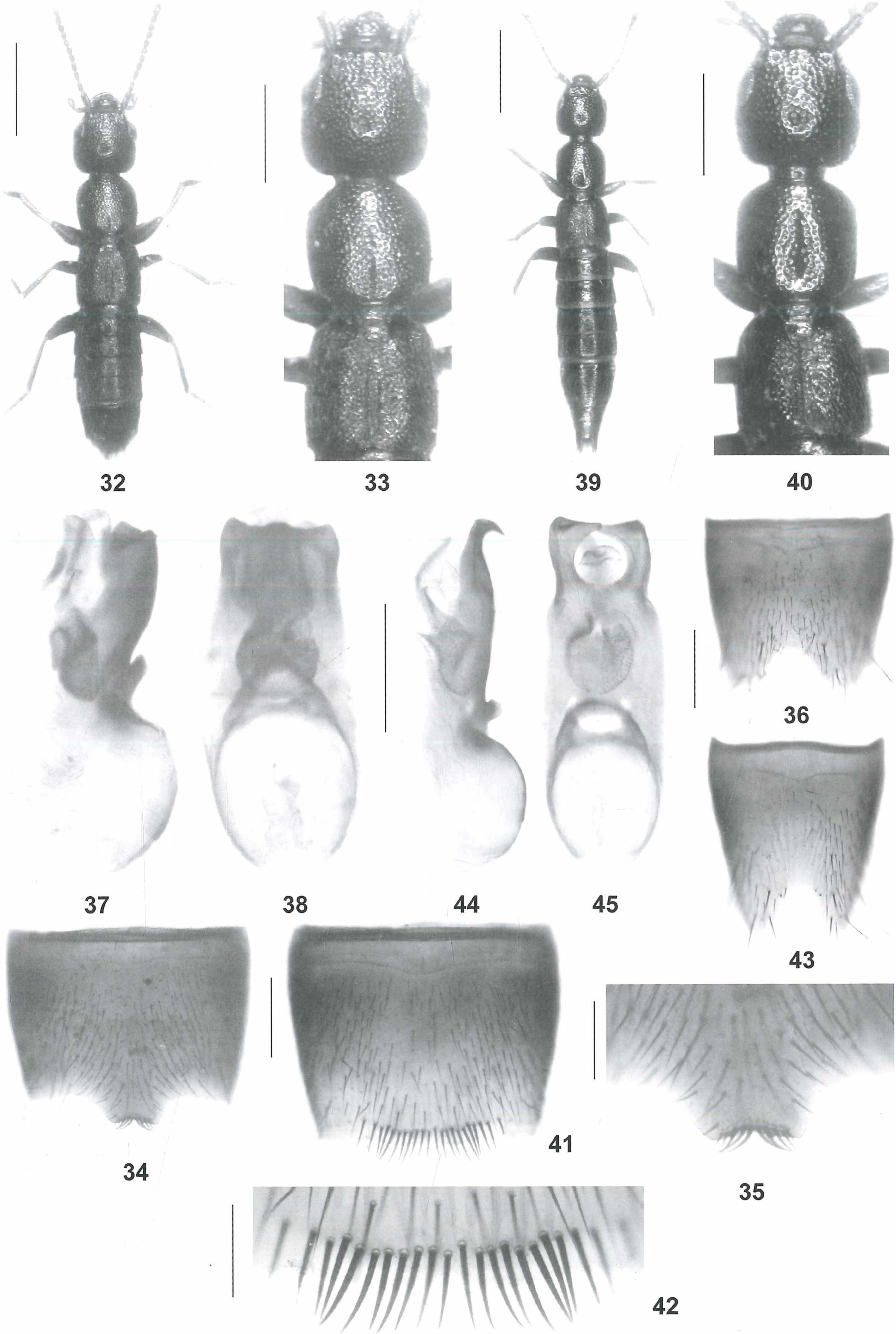
Fig. 1: Distribution of the species of the *Medon petrochilosi* subgroup in the East Mediterranean: *M. petrochilosi* (filled diamonds); *M. guignoti* (open diamonds); *M. excavatus* (star); *M. cerrutii* (circles); *M. impar* (open triangles); *M. caricus* (filled squares); *M. subquadratus* (open squares); *M. seleucus* (filled triangles).



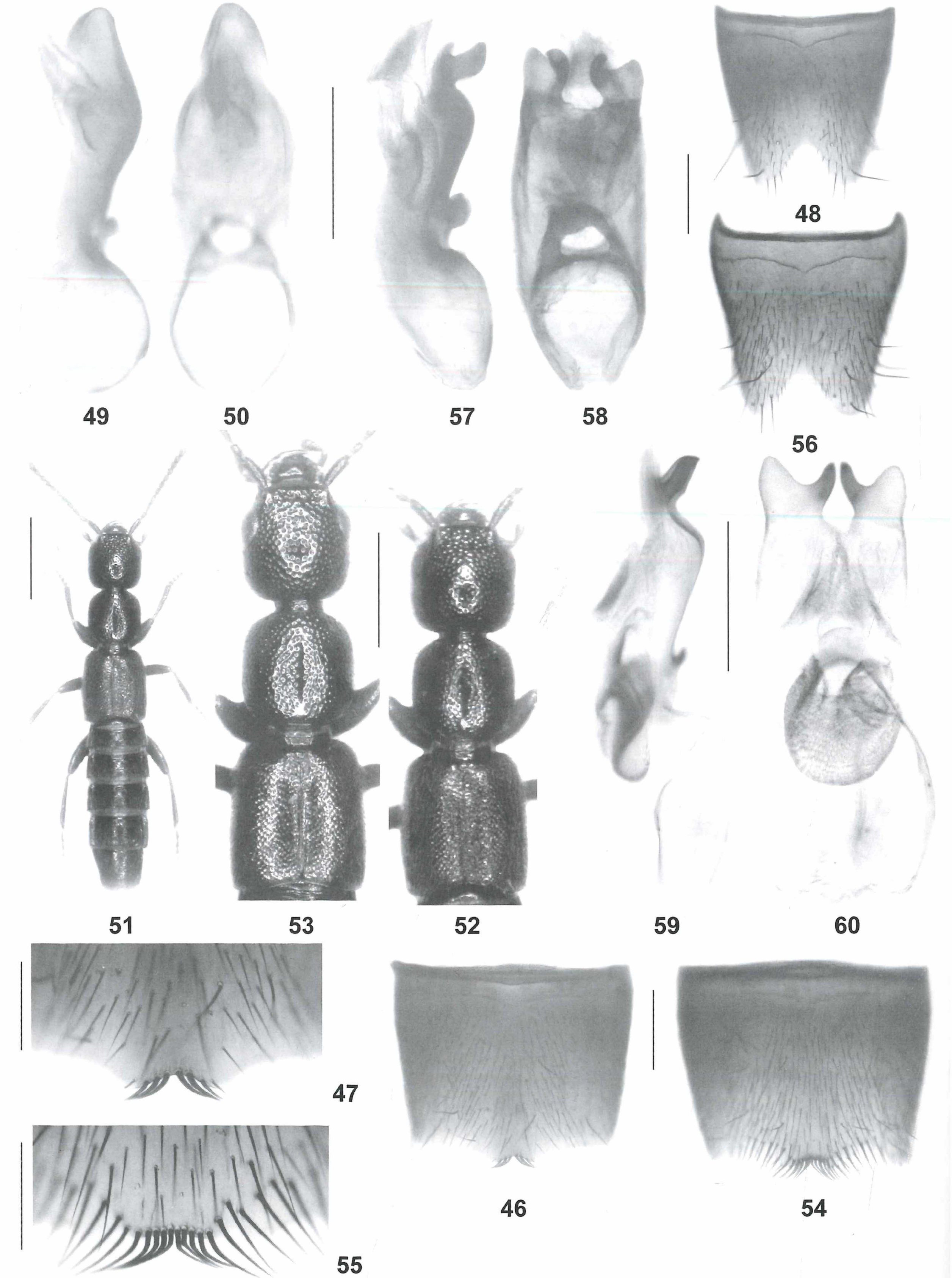
Figs 2–15: *Medon excavatus* sp. n. (**2–5**), *M. manasluensis* Assing (**6–10**), and *M. schawalleri* sp. n. (**11–15**). Male sternite VII (**2, 6, 12**); male sternite VIII (**3, 7, 13**); aedeagus in lateral and in ventral view (**4–5, 9–10, 14–15**); postero-median portion of male sternite VII (**7**); forebody (**11**). Scale bars: 11: 0.5 mm; 2–10, 12–15: 0.2 mm.



Figs 16–31: *Medon schawalleri* sp. n. (**16–18**), *M. bifidus* sp. n. (**19–24**), and *M. biapicalis* sp. n. (**25–31**). Dorsal portion of head (**16**); median portion of pronotum (**17**); sutural portion of right elytron (**18**); habitus (**19, 25**); male sternite VII (**20, 27**); postero-median portion of male sternite VII (**21, 28**); male sternite VIII (**22, 29**); aedeagus in lateral and in ventral view (**23–24, 30–31**); forebody (**26**). Scale bars: 19, 25: 1.0 mm; 26: 0.5 mm; 16–18, 20–24, 27–31: 0.2 mm.



Figs 32–45: *Medon annapurnae* sp. n. (**32–38**) and *M. dhaulagiricus* sp. n. (**39–45**). Habitus (**32, 39**); forebody (**33, 40**); male sternite VII (**34, 41**); postero-median portion of male sternite VII (**35, 42**); male sternite VIII (**36, 43**); aedeagus in lateral and in ventral view (**37–38, 44–45**). Scale bars: 32, 39: 1.0 mm; 33, 40: 0.5 mm; 34, 36–38, 41, 43–45: 0.2 mm; 35, 42: 0.1 mm.



Figs 46–60: *Medon inexcisus* sp. n. (**46–50**) and *M. corniger* sp. n. (**51–60**) from Darjeeling (**51–52, 54, 56–58**) and Yunnan (**53, 55, 59–60**). Male sternite VII (**46, 54**); postero-median portion of male sternite VII (**47, 55**); male sternite VIII (**48, 56**); aedeagus in lateral and in ventral view (**49–50, 57–60**); habitus (**51**); forebody (**52–53**). Scale bars: 51–53: 1.0 mm; 46, 48–50, 54, 56–60: 0.2 mm; 47, 55: 0.1 mm.

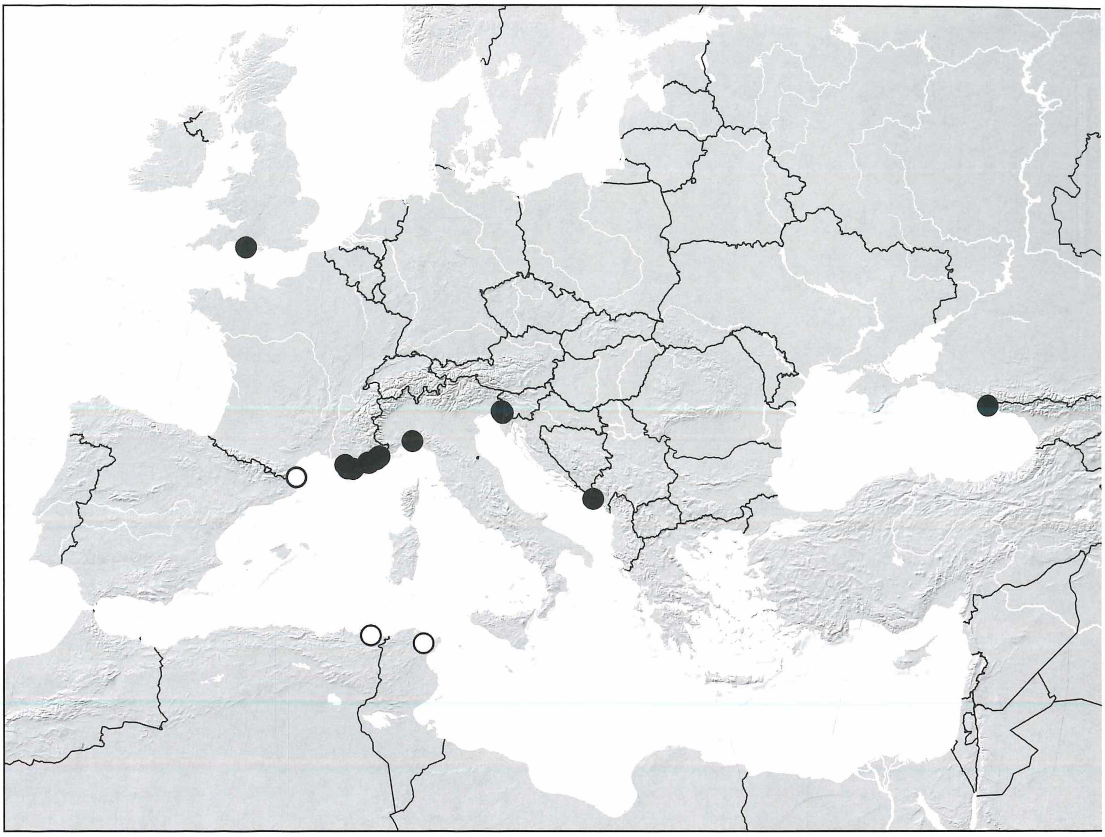


Fig. 61: Distribution of *Medon pocofer* (filled circles: revised records; open circles: selected literature records).

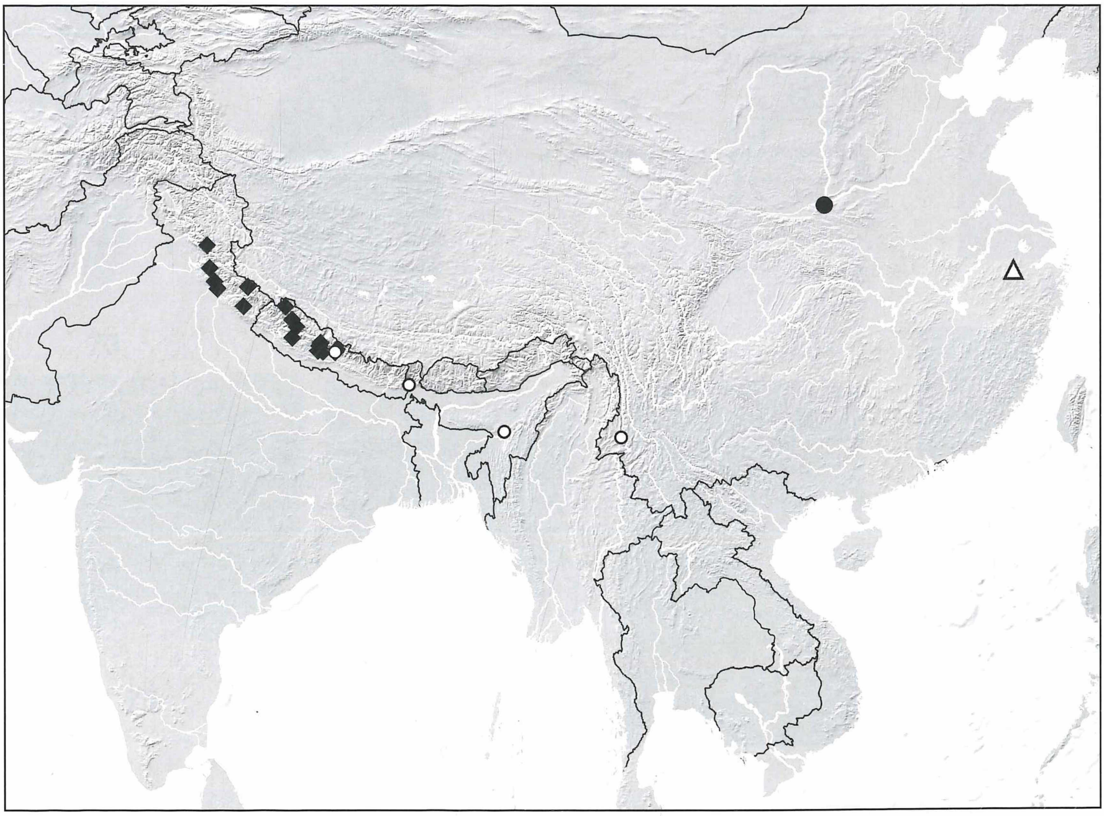


Fig. 62: Distributions of *Medon niger* (diamonds), *M. corniger* (open circles), *M. shaanxiensis* (filled circle), and *M. perforatus* (triangle).

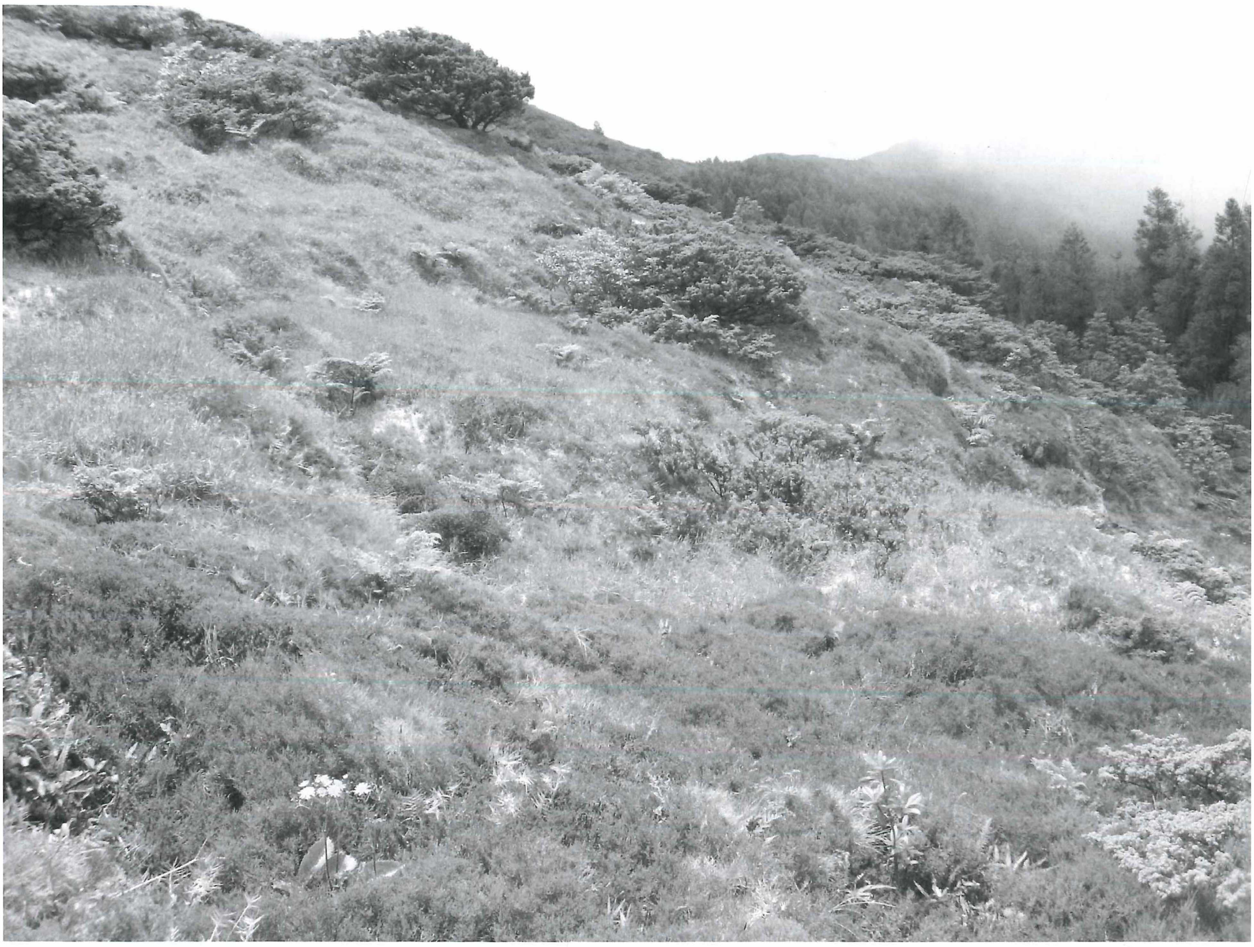
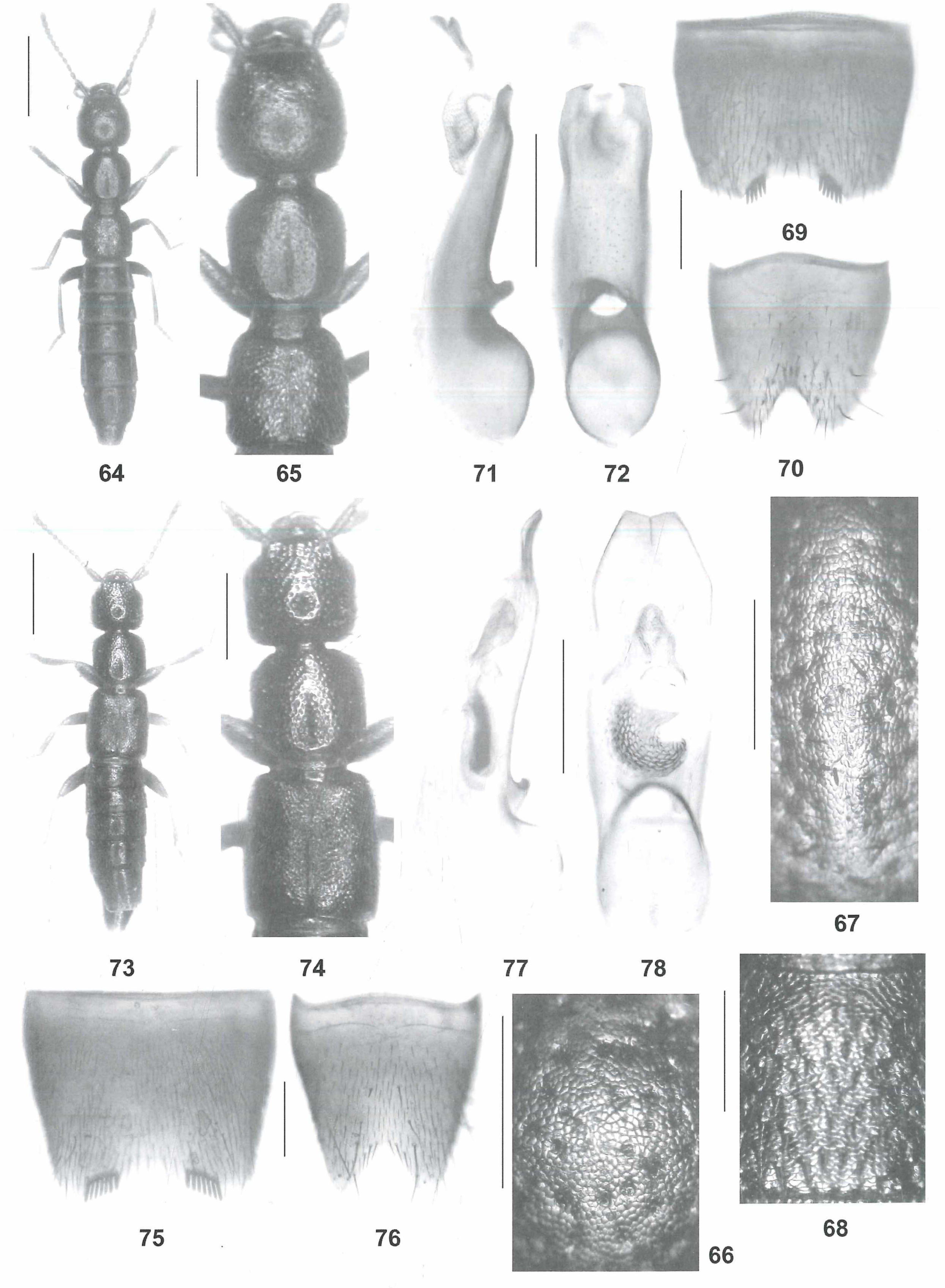
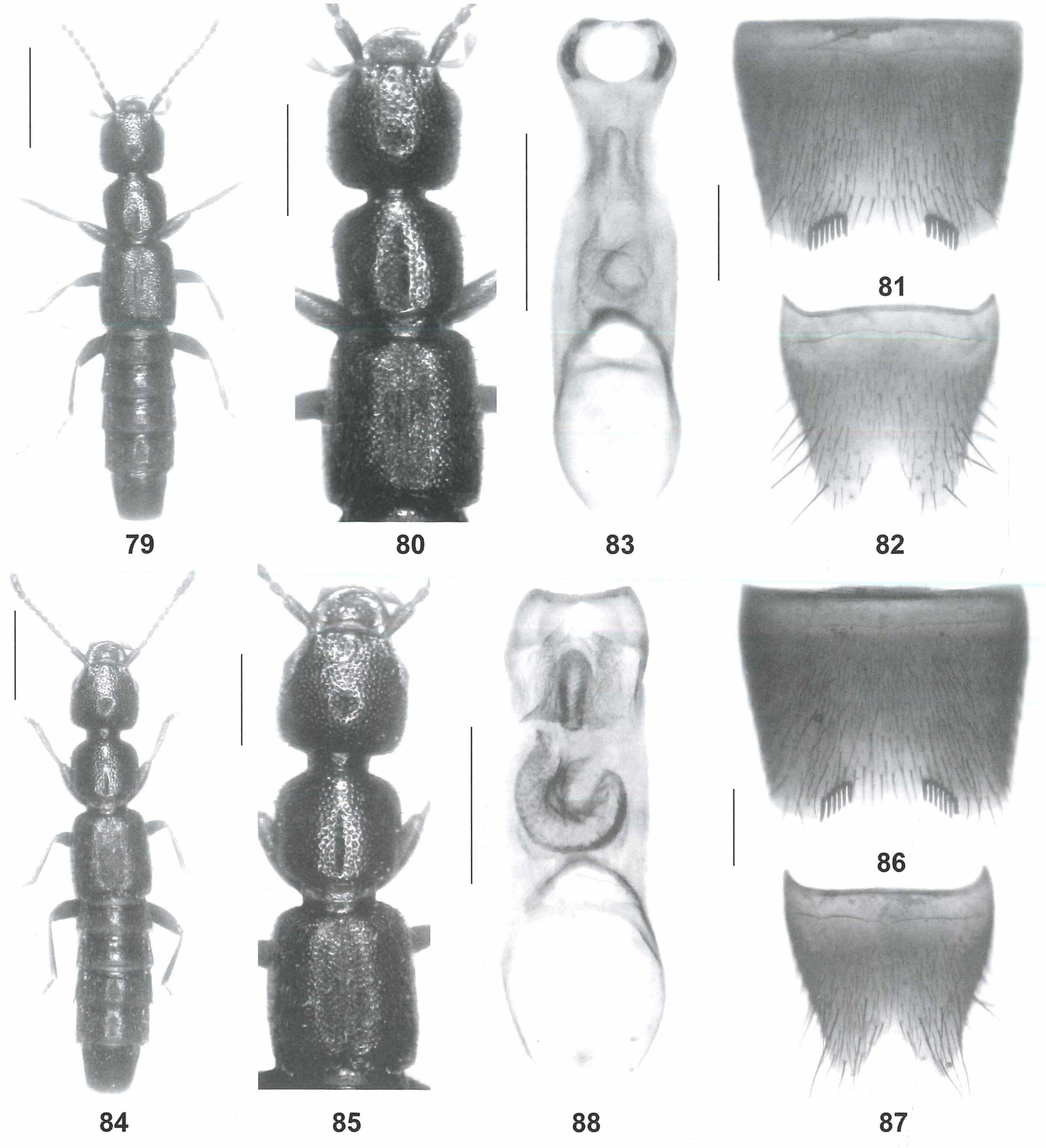


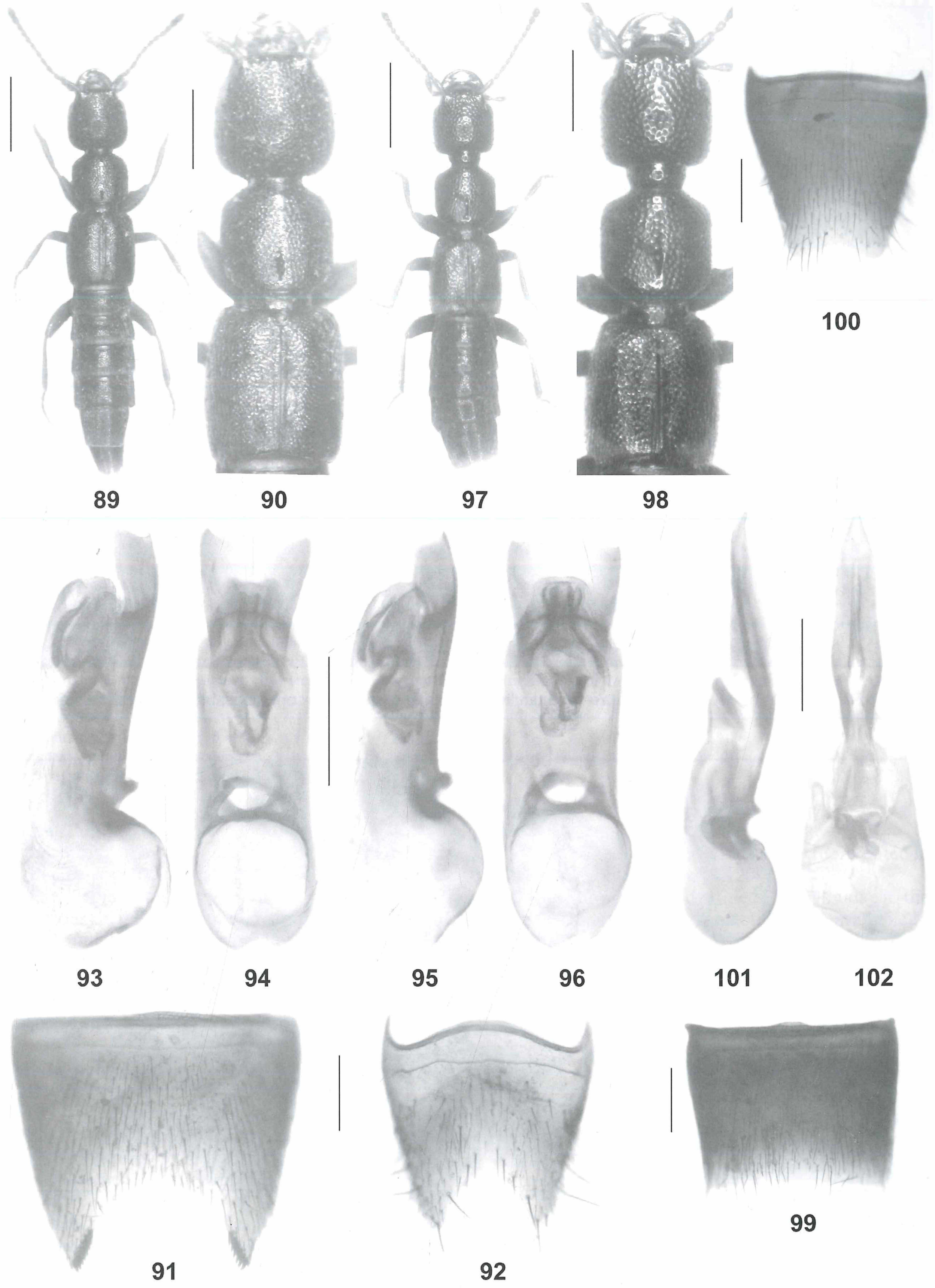
Fig. 63: Type locality of *Medon varamontis* sp. n.



Figs 64–78: *Medon varamontis* sp. n. (**64–72**) and *M. niger* CAMERON, lectotype (**73–78**). Habitus (**64, 73**); forebody (**65, 74**); median dorsal portion of head (**66**); median portion of pronotum (**67**); median portion of tergite VI (**68**); male sternite VII (**69, 75**); male sternite VIII (**70, 76**); aedeagus in lateral and in ventral view (**71–72, 77–78**). Scale bars: 64, 73: 1.0 mm; 65, 74: 0.5 mm; 66–72, 75–78: 0.2 mm.



Figs 79–88: *Medon perforatus* sp. n. (**79–83**) and *M. shaanxiensis* sp. n. (**84–88**). Habitus (**79, 84**); forebody (**80, 85**); male sternite VII (**81, 86**); male sternite VIII (**82, 87**); aedeagus in ventral view (**83, 88**). Scale bars: 79, 84: 1.0 mm; 80, 85: 0.5 mm; 81–83, 86–88: 0.2 mm.



Figs 89–102: *Medon umbilicatus* CAMERON (**89–94**: lectotype; **95–96**: male from Pakistan) and *M. flavomarginatus* sp. n. (**97–102**). Habitus (**89, 97**); forebody (**90, 98**); male sternite VII (**91, 99**); male sternite VIII (**92, 100**); aedeagus in lateral and in ventral view (**93–96, 101–102**). Scale bars: 89, 97: 1.0 mm; 90, 98: 0.5 mm; 91–96, 99–102: 0.2 mm.

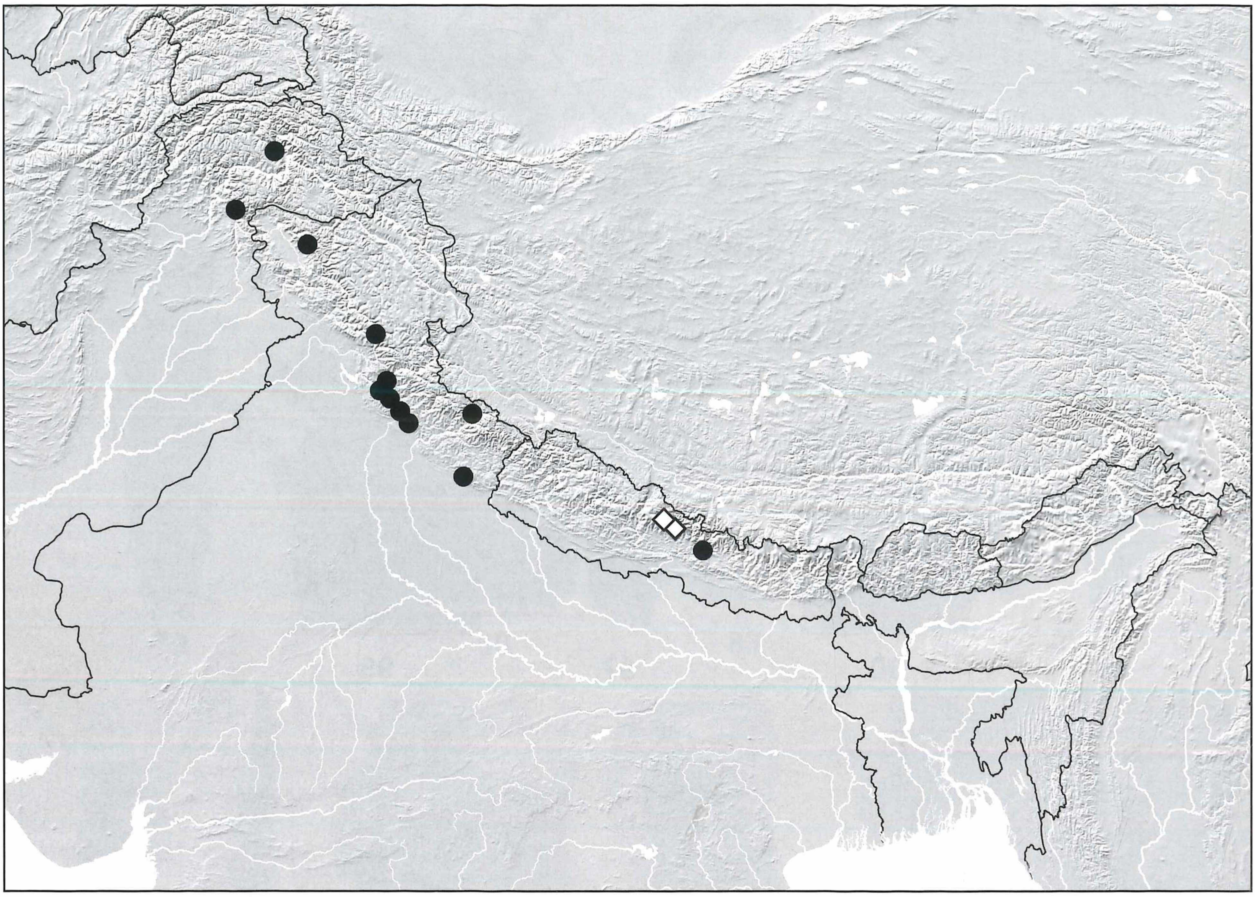


Fig. 103: Distributions of *Medon umbilicatus* (filled circles) and *M. flavomarginatus* (open diamonds) in the Himalaya.

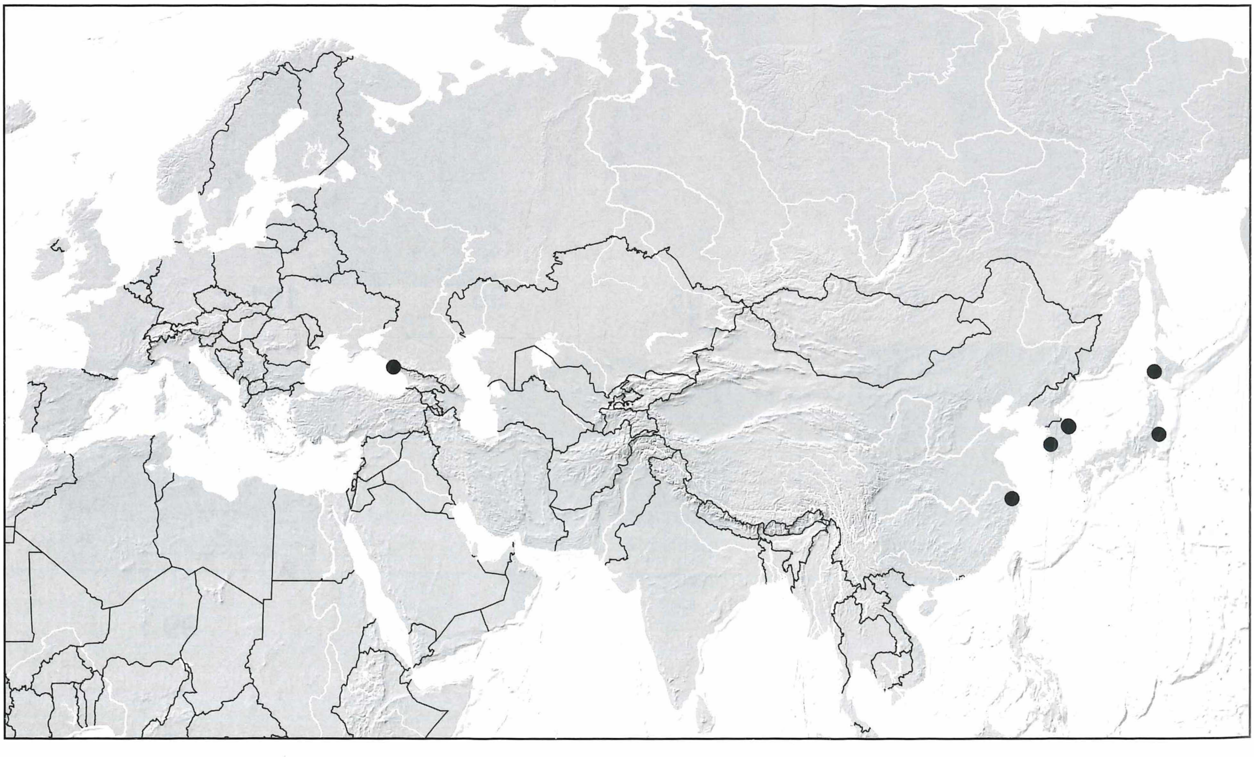


Fig. 104: Distribution of *Luzea rubecula*.